					ST PARTMENT DIVISION O		RAL RES				AMENE	FOF	RM 3	
		АР	PLICATION FO	R PERMIT	TO DRILI	L				1. WELL NAME and	NUMBER IBU 921-2			
2. TYPE	OF WORK	DRILL NEW WELL	REENTER I	P&A WELL	DEEPE	N WELL)			3. FIELD OR WILDO	AT NATURAL	BUTTES		
4. TYPE	OF WELL	Te	st Well Coa	albed Methan	ne Well: NO					5. UNIT or COMMUN	NITIZATI NATURAL		EMENT	NAME
6. NAME	OF OPERATO	R	KERR-MCGEE OIL 8				7. OPERATOR PHONE 720 929-6515							
8. ADDR	ESS OF OPER	ATOR	P.O. Box 173779,	Denver, CO.	, 80217					9. OPERATOR E-MA julie.ja		anadarko.	com	
	ERAL LEASE N		·	11. MINI	ERAL OWNE		STATE (i) FEE		12. SURFACE OWNE	ERSHIP DIAN (STATE	<u> </u>	EE ()
13. NAM		E OWNER (if box	12 = 'fee')							14. SURFACE OWNE	R PHON	E (if box	12 = 'fe	e')
15. ADDI	RESS OF SURI	FACE OWNER (if	box 12 = 'fee')					16. SURFACE OWNE	R E-MAI	L (if box	12 = 'fe	e')		
17. INDI	AN ALLOTTE	E OR TRIBE NAM	E		ND TO COM		RODUCT	ION FROI	м	19. SLANT				
(if box 1	2 = 'INDIAN')		YES (Commingling) Applicati	on) NO	•	VERTICAL DIR	ECTIONA	L 📵 H	IORIZON	TAL 🔵
20. LOC	ATION OF WI	ELL	F	OOTAGES		QTR-Q	QTR	SECT	TION	TOWNSHIP	RA	NGE	MEI	RIDIAN
LOCATI	ON AT SURFA	ICE	787	FNL 907 FW	/L	NWN	w	25	5	9.0 S	21	.0 E		S
Top of U	Jppermost Pr	oducing Zone	282 F	NL 1335 F	WL	NENV	W	25	5	9.0 S	21	.0 E		S
At Total	Depth		282 F	NL 1335 F\	WL	NENV	N	25	5	9.0 S 2		.0 E		S
21. COUI	NTY	UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet)				23. NUMBER OF AC	RES IN D		UNIT			
		UNIAH				EAREST W	26. PROPOSED DEPTH MD: 10827 TVD: 10750					50		
27. ELEV	ATION - GRO	UND LEVEL		28. BON	D NUMBER	033	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF AF							
		4941				2201354	12				PROVAL Permit #4		IF APPL	ICABLE
									tion					
				Hole	e, Casing,	and Cem	ent Info	ormatio	n					
String	Hole Size	Casing Size	Length	Weight	Grade &	Thread	Max N	1ud Wt.	n	Cement		Sacks	Yield	Weight
String Surf	Hole Size		Length 7350 - 2650		Grade &		Max N		n	Type V		180	1.15	15.8
Surf	11	Casing Size 8.625	7350 - 2650	Weight 28.0	Grade & J-55	Thread	Max N	1ud Wt. 3.4	n	Type V Class G		180 270	1.15 1.15	15.8 15.8
		Casing Size		Weight	Grade & J-55	Thread	Max N	1ud Wt.	n	Type V Class G None		180 270 0	1.15 1.15 0.0	15.8 15.8 0.0
Surf	7.875	8.625 4.5	7350 - 2650 0 - 7350	28.0 11.6	Grade & J-55	Thread LT&C LT&C	Max N	1ud Wt. 3.4 2.5		Type V Class G None None		180 270 0 0	1.15 1.15 0.0 0.0	15.8 15.8 0.0 0.0
Surf	11	Casing Size 8.625	7350 - 2650	Weight 28.0	Grade & J-55	Thread	Max N	1ud Wt. 3.4		Type V Class G None None mium Lite High Str	ength	180 270 0 0 320	1.15 1.15 0.0 0.0 3.38	15.8 15.8 0.0 0.0 11.0
Surf	7.875	8.625 4.5	7350 - 2650 0 - 7350	28.0 11.6	Grade & J-55 I-80	Thread LT&C LT&C LT&C	Max N	1ud Wt. 3.4 2.5		Type V Class G None None	ength	180 270 0 0	1.15 1.15 0.0 0.0	15.8 15.8 0.0 0.0
Surf	7.875	Casing Size 8.625 4.5 3.5	7350 - 2650 0 - 7350 7350 - 10827	28.0 11.6	Grade & J-55 I-80 L-80	Thread LT&C LT&C LT&C TTACHME	Max M	1ud Wt. 3.4 2.5 2.5	Pre	Type V Class G None None mium Lite High Str 50/50 Poz		180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf	7.875	Casing Size 8.625 4.5 3.5	7350 - 2650 0 - 7350 7350 - 10827	28.0 11.6	Grade & J-55 I-80 L-80	Thread LT&C LT&C LT&C TTACHME	Max M	1ud Wt. 3.4 2.5 2.5	Pre	Type V Class G None None mium Lite High Str		180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf Prod L1	7.875 7.875 VERIFY	Casing Size 8.625 4.5 3.5	7350 - 2650 0 - 7350 7350 - 10827	28.0 11.6 9.3	Grade & J-55 I-80 L-80 ACCORDAN	Thread LT&C LT&C LT&C TTACHME	Max M	1ud Wt. 3.4 2.5 2.5	Pre	Type V Class G None None mium Lite High Str 50/50 Poz		180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf Prod L1	7.875 7.875 VERIFY	Casing Size 8.625 4.5 3.5 THE FOLLOWI	7350 - 2650 0 - 7350 7350 - 10827 NG ARE ATTAC	Weight 28.0 11.6 9.3 HED IN AG	Grade & J-55 I-80 L-80 CCORDAN	Thread LT&C LT&C LT&C TTACHME CE WITH	Max M	1ud Wt. 3.4 2.5 2.5 2.7	Pre AND G	Type V Class G None None mium Lite High Str 50/50 Poz	ON GEN	180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf Prod L1 AF	7.875 7.875 VERIFY VELL PLAT OR	Casing Size 8.625 4.5 3.5 THE FOLLOWI MAP PREPARED STATUS OF SURI	7350 - 2650 0 - 7350 7350 - 10827 NG ARE ATTAC	Weight 28.0 11.6 9.3 HED IN A	Grade & J-55 I-80 L-80 CCORDAN R ENGINEE	Thread LT&C LT&C LT&C TTACHME CE WITH	Max M	1ud Wt. 3.4 2.5 2.5 2.7	Pre AND G	Type V Class G None None Type V Class G None None Type V None None None Type V None None None None None None None None	ON GEN	180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf Prod L1 AF DRILLED	7.875 7.875 VERIFY VELL PLAT OR	Casing Size 8.625 4.5 3.5 THE FOLLOWI MAP PREPARED STATUS OF SURI	7350 - 2650 0 - 7350 7350 - 10827 NG ARE ATTAC BY LICENSED SL	Weight 28.0 11.6 9.3 HED IN A	Grade & J-55 I-80 L-80 CCORDAN R ENGINEE	TTACHME CE WITH CACE)	Max M	Aud Wt. 3.4 2.5 2.5 2.5 AH OIL PLETE DR	AND G	Type V Class G None None Type V Class G None None Type V None None None Type V None None None None None None None None	ON GEN	180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf Prod L1 AF DRILLED	7.875 7.875 VERIFY VELL PLAT OR FIDAVIT OF STRECTIONAL SO	Casing Size 8.625 4.5 3.5 THE FOLLOWI MAP PREPARED STATUS OF SURI	7350 - 2650 0 - 7350 7350 - 10827 NG ARE ATTAC BY LICENSED SL	Weight 28.0 11.6 9.3 HED IN A	Grade & J-55 I-80 L-80 A CCORDAN R ENGINEE F FEE SURF	TTACHME CE WITH CACE)	Max M	Aud Wt. 3.4 2.5 2.5 2.5 AH OIL PLETE DR GRAPHIC	Pre AND G RILLING PERATOR CAL MAP	Type V Class G None None Type V Class G None None Type V None None Type V None None None None None None None None	ON GEN	180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0
Surf Prod L1 L1 DRILLED NAME A SIGNAT	7.875 7.875 VERIFY VELL PLAT OR FIDAVIT OF STRECTIONAL SO	Casing Size 8.625 4.5 3.5 THE FOLLOWI MAP PREPARED STATUS OF SURI	7350 - 2650 0 - 7350 7350 - 10827 NG ARE ATTAC BY LICENSED SL	Weight 28.0 11.6 9.3 HED IN AGENERAL (I	Grade & J-55 I-80 L-80 CCORDAN R ENGINEE F FEE SURF ZONTALLY	TTACHME CE WITH CACE)	Max M	Aud Wt. 3.4 2.5 2.5 2.5 AH OIL PLETE DR GRAPHIC	Pre AND G RILLING PERATOR CAL MAP	Type V Class G None None Type V Class G None None Type V None None None Type V None None None None None None None None	ON GEN	180 270 0 0 320 1920	1.15 1.15 0.0 0.0 3.38 1.31	15.8 15.8 0.0 0.0 11.0

NBU 921-25D Pad Drilling Program
1 of 7

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-25C MW2

Surface: 787 FNL / 907 FWL NWNW BHL: 282 FNL / 1335 FWL NENW

Section 25 T9S R21E

Unitah County, Utah Mineral Lease: UO 01189 ST

ONSHORE ORDER NO. 1

DRILLING PROGRAM

Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1557	
Birds Nest	1829	Water
Mahogany	2198	Water
Wasatch	4800	Gas
Mesaverde	7515	Gas
MVU2	8469	Gas
MVL1	9033	Gas
Sego	9747	Gas
Castlegate	9794	Gas
MN5	10213	Gas
TVD	10750	Gas
TD	10827	Gas

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

NBU 921-25D Pad Drilling Program 2 of 7

6. <u>Evaluation Program:</u>

Please refer to the attached Drilling Program

7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 10750' TVD, approximately equals 6,865 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,500 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 921-25D Pad Drilling Program
3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KM0 well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 921-25D Pad Drilling Program
4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. <u>Other Information:</u>

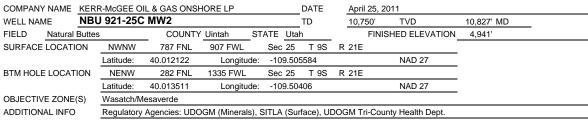
Please refer to the attached Drilling Program.

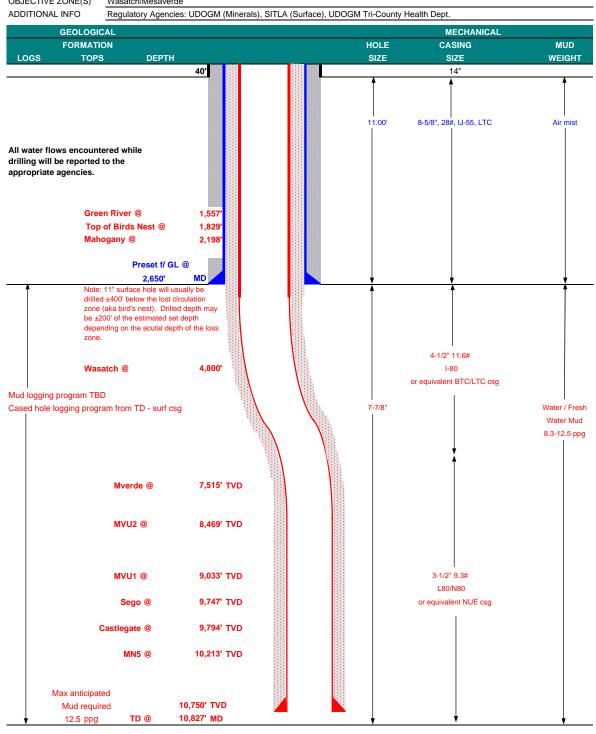
Drilling Program 5 of 7

NBU 921-25D Pad



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM





Drilling Program 6 of 7

NBU 921-25D Pad Drilling Pro



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM	M			DESIGN F	ACTORS							
										LTC	BTC	
	SIZE	INTE	INTERVAL			GR.	CPLG.	BURST	COLLAPSE	TE	NSION	
CONDUCTOR	14"	0-	-40'									
								3,390	1,880	348,000	N/A	
SURFACE	8-5/8"	0	to	2,650	28.00	IJ-55	LTC	2.04	1.52	5.36	N/A	
								7,780	6,350	279,000	367,000	
PRODUCTION	4-1/2"	0	to	7,350	11.60	I-80	LTC or BTC	1.11	0.91	4.04	5.32	
								10,160	10,540	158,000	N/A	
PRODUCTION	3-1/2"	7,350	to	10,827	9.30	L80/N80	NUE	1.45	1.51	6.04	N/A	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	łT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele			•		
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
		+ 2% CaCl + 0.25 pps flocele			•		
SURFACE		NOTE: If well will circulate water	to surface, o	ption 2 will I	be utilized		
Option 2 LEAD	2,150'	65/35 Poz + 6% Gel + 10 pps gilsonite	200	35%	11.00		3.82
		+ 0.25 pps Flocele + 3% salt BWOW			_		
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,297'	Premium Lite II +0.25 pps	320	20%	11.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	6,530'	50/50 Poz/G + 10% salt + 2% gel	1,920	30%	14.30		1.31
		+ 0.1% R-3					

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE Guide shoe, 1 jt, insert float.

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

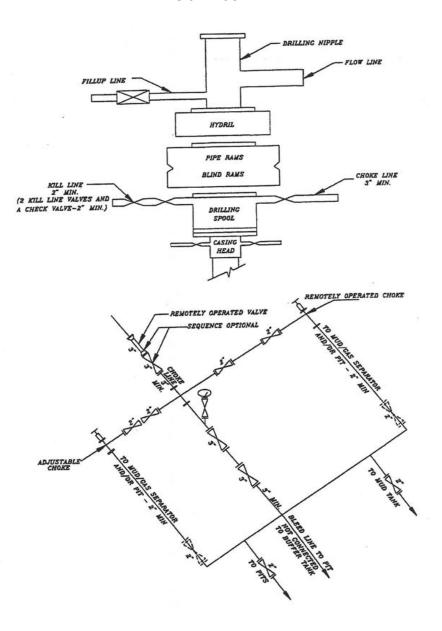
DRILLING ENGINEER:		DATE:	
	Nick Spence / Emile Goodwin		
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young		

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

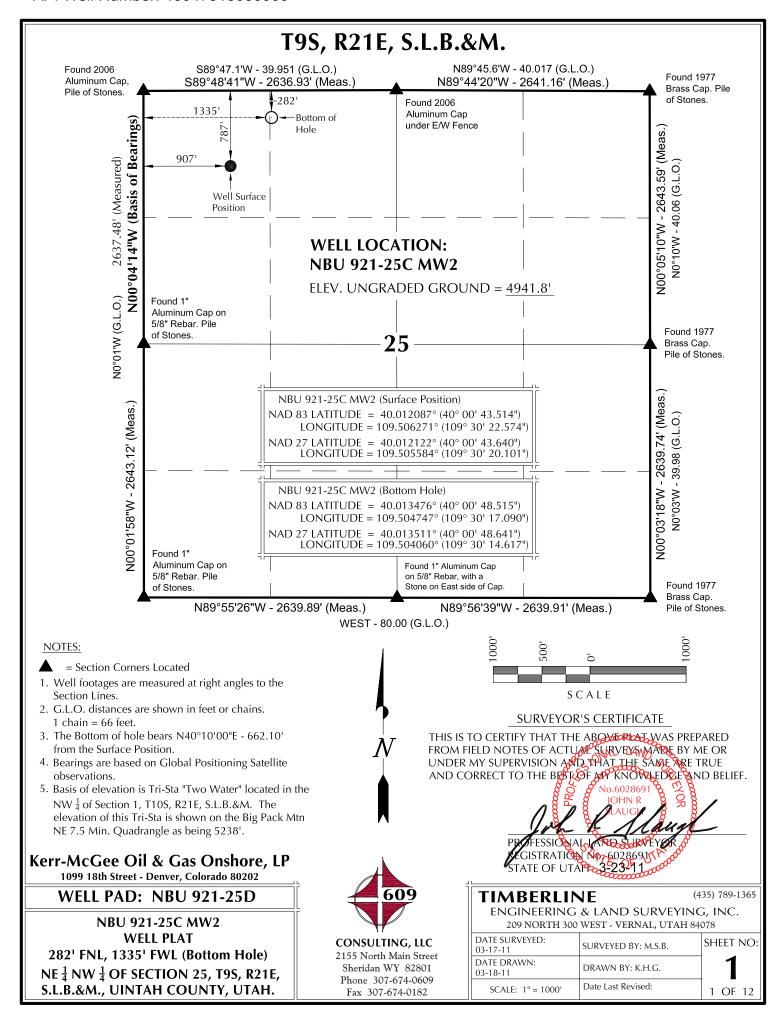
Drilling Program 7 of 7

NBU 921-25D Pad

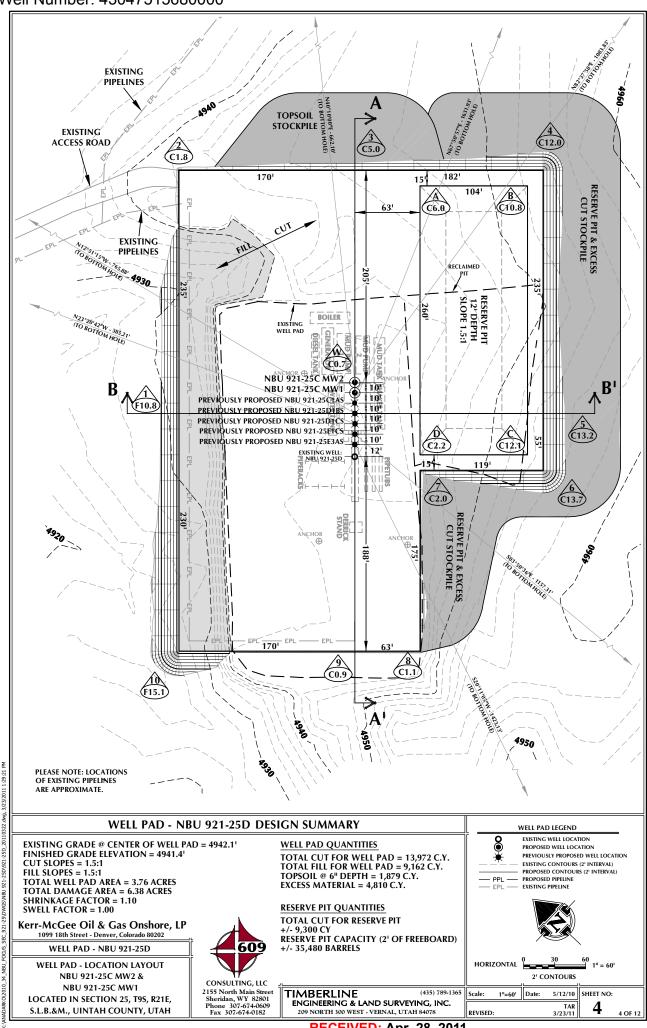
EXHIBIT A NBU 921-25C MW2

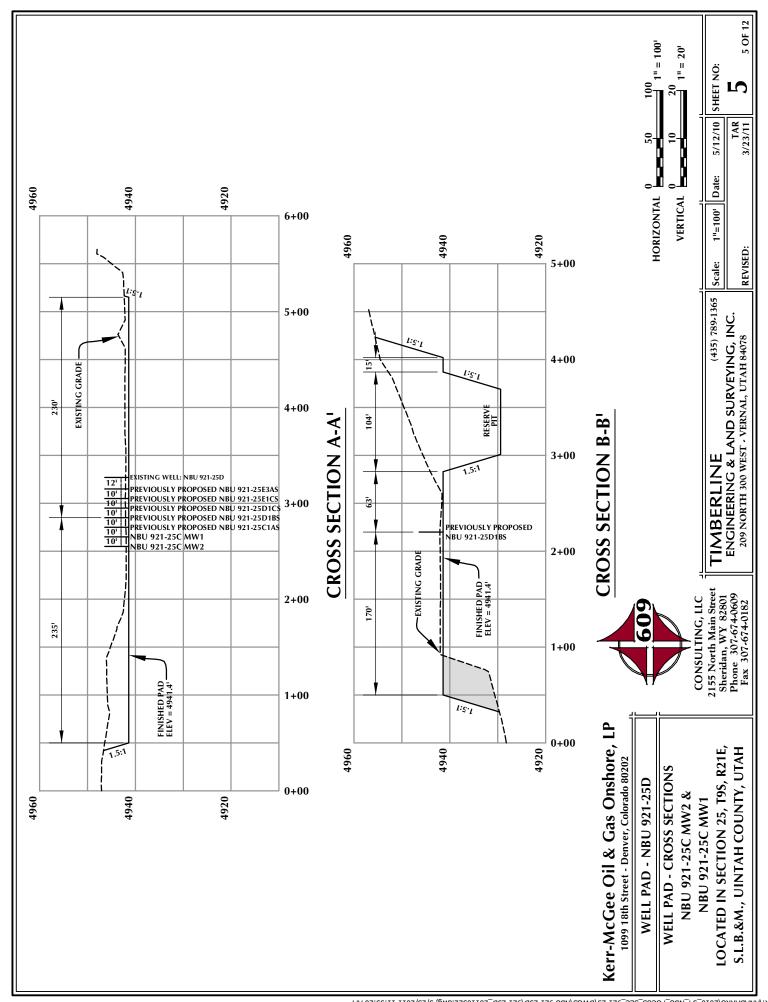


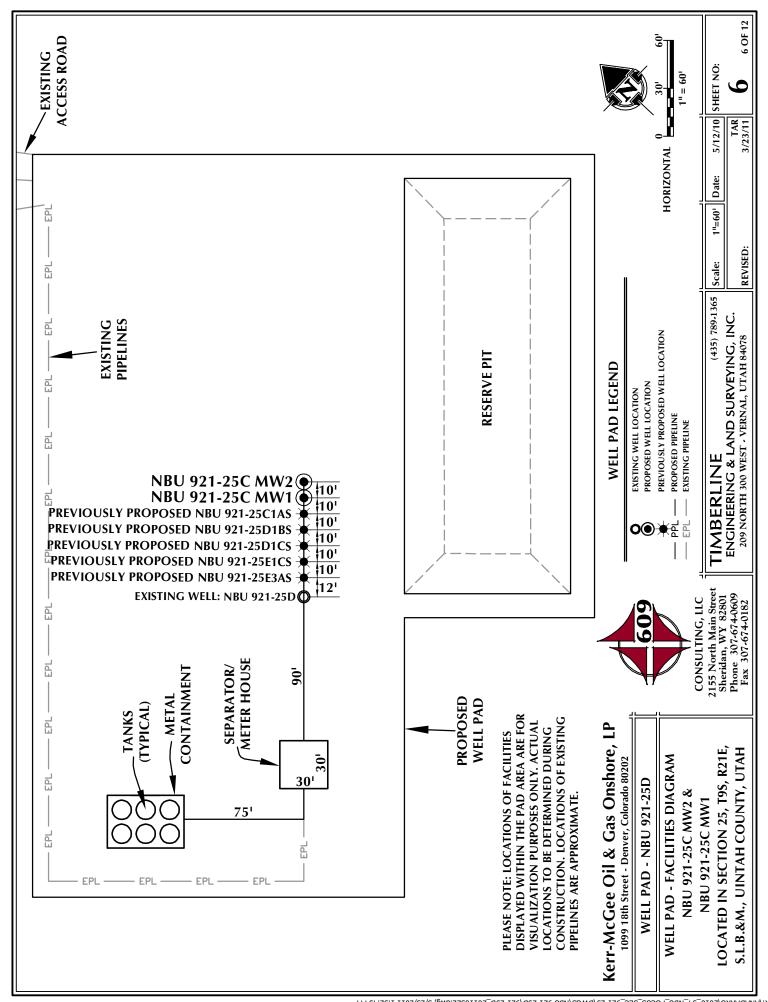
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



			SURFACE PO			BOTTOM HOLE							
WELL NAME	NA LATITUDE	D83 LONGIT	UDE LATITU	NAD27	GITUDE	FOOTAGES	LATIT	NAD	83 LONGITUI)F I	NAE Latitude	127 LONGITUDE	FOOTAGES
NBU 921-25C	40°00'43.514"				'20.101"	787' FNL	40°00'4		109°30'17.09	_	0°00'48.641"	109°30'14.617"	282' FNL
MW2	40.012087° 40°00'43.446"	109.50627				907' FWL	40.0134		109.504747°	_	0.013511°	109.504060°	13351 FWL
NBU 921-25C MW1	40°00'43.446" 40.012068°	109°30'22 109.50629			'20.196" 5610°	793' FNL 900' FWL	40°00'4 40.0124		109°30'08.8! 109.502461°	-)°00'44.950").012486°	109°30'06.386" 109.501 <i>774</i> °	658' FNL 1975' FWL
NBU	40°00'43.377'	" 109°30'22	.761" 40°00'43	.504" 109°30	'20.288"	800' FNL	40°00'4	49.463"	109°30'03.3		0°00'49.590"	109°30'00.872"	190' FNL
921-25C1AS NBU	40.012049° 40°00'43.309'	109.50632 109°30'22			5636° '20.382"	893' FWL 807' FNL	40.0133 40°00'5		109.500929° 109°30'25.0	_).013775°)°00'50.812"	109.500242° 109°30'22.575"	2405' FWL 60' FNL
921-25D1BS	40.012030°	109.50634	40.01206	55° 109.50	5662°	885' FWL	40.0140	079°	109.506958°	40).014114°	109.506271°	716' FWL
NBU 921-25D1CS	40°00'43.240' 40.012011°	109.50637		1.00.00	'20.475" 5687°	814' FNL 878' FWL	40°00'4 40.012		109°30'24.9 109.506920°)°00'46.860").013017°	109°30'22.438" 109.506233°	460' FNL 726' FWL
NBU 921-25E1CS	40°00'43.172' 40.011992°	109°30'23 109.50640		1.0000	'20.569" 571.4°	821' FNL 871' FWL	40°00'3 40.008		109°30'22.0 109.506122°)°00'31.890").008858°	109°30'19.566" 109.505435°	1976' FNL 947' FWL
NBU	40°00'43.104'	" 109°30'23	.134" 40°00'43	.230" 109°30	'20.661"	828' FNL	40°00'2	29.905"	109°30'29.4	35" 40	0°00'30.031"	109°30'26.962"	2162' FNL
921-25E3AS NBU	40.011973° 40°00'43.023'	109.50642 109°30'23			5739° '20.773"	864' FWL 836' FNL	40.0083	307°	109.508176°	40).008342°	109.507489°	371' FWL
921-25D	40.011951°	109.50645		1.00.00		855' FWL							
M/FI	NORTH	FACT	1	TIVE COORD							34/511	F NORTH	
WELL NAME NBU 921-25C	NORTH	EAST	WELL NAME NBU 921-25C	NORTH	1.074	NIDII	NAME	NORT			WELL NAM		EAST 170.41
MW2	506.0'	427.1'	MW1	139.0	1,074	921-2		615.			921-25D1B	s 746.7'	-170.4'
WELL NAME NBU	NORTH	EAST	WELL NAME NBU	NORTH	EAS		NAME	NORT				_	
921-25D1CS	353.7'	-152.6'	921-25E1CS	-1154.7'	77.6	921-2	5E3AS	-1335	5.7' -491	.0'		\	7
	BASIS OF OF THE N	F BEARING	S IS THE WESS ECTION 25, T S TAKEN FRO ING SATELLIT D BEAR NOO'C	T LINE 9S, R21E, M TE 14'14"W	ARONOSED NA	180 97 180 97 180 97 180 97	102725CA1	hh a			N67°51	67.84917° 67.84917° 67.87"E 1631: 80ttom Hole	33'
	GLOBAL OBSERVA	NW ¼ OF S I. WHICH I POSITION ATIONS TO	S IS THE WES' ECTION 25, T IS TAKEN FRO SING SATELLIT D BEAR NOO°C	M E 14'14"W	180 9	25.7.356.35 25.7.356.35 27.7.350 27.7.350		10 10	, io /	Zi	82°37 30 (To Bot AZ=8	E - 1083.6 tom Hole) 12.63278°	33'
	GLOBAL OBSERVA	S C A L E	S TAKEN FRO IING SATELLIT D BEAR NOO°C	M TE 14'14"W			15667° 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,	X,0,		Z	(To Bot AZ=8	TE - 1083.6 tom Hole) 12.63278°	33'
Kerr-Mc0	GLOBAL OBSERV/	S C A L E	S TAKEN FRO SING SATELLIT D BEAR NOO'C Dnshore, rado 80202	M TE 14'14"W		(10 Bottom Hole) (12.13)	1567° 0,1567° 0,0	803°50'36 E 1137.33			AZ=8	12.63278°	33'
Kerr-Mc0	GLOBAL OBSERVA	S C A L E	S TAKEN FRO SING SATELLIT D BEAR NOO'C Dnshore, rado 80202 21-25D	M E 14'14"W			1567° 0,1567° 0,0	S03°50'36 E 115' 55'	MBER	LIN	AZ=8	(4: SURVEYING	35) 789-1365 G, INC.
Kerr-Mcc 1099 1 WEL WELL P.	GLOBAL OBSERVA GEORGE GEORGE	& Gas (enver, Colo RFEREN	Dnshore, rado 80202	M E 14'14"W	\$20°,11°05",18475°	609 100000000000000000000000000000000000	(To Bottom Hole)	\$03°50'36 E 1.27'36 E 1.27'50'36 E 1.27'50'36'50'36'50'36'50'36'50'36'50'36'50'36'50'36'50'50'50'50'50'50'50'50'50'50'50'50'50'	MBER NGINEER 209 NORT	LIN	AZ=8	(4: SURVEYINC NAL, UTAH 840	35) 789-1365 6, INC.
Kerr-McC 1099 1 WEL WELL PA	Gee Oil & Bth Street - De L PAD - L PAD INTE S - NBU 92	& Gas (enver, Colo NBU 92 RFEREN 21-25C	Onshore, rado 80202 21-25D NCE PLAT	M E 14'14"W	S20°, 17°, 520°, 1847, 5°, 11°, 1847, 1	1. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	(To Bottom Hole)	\$03°50'36 E 1.27'36 E 1.27'50'36 E 1.27'50'36'50'36'50'36'50'36'50'36'50'36'50'36'50'36'50'50'50'50'50'50'50'50'50'50'50'50'50'	MBER NGINEER 209 NORT	LIN	AZ=8	(4: SURVEYINC NAL, UTAH 840	35) 789-1365 G, INC.
Kerr-McC 1099 1 WEL WELL PA	Gee Oil & Bth Street - De L PAD - L PAD - L S - NBU 921-	& Gas (enver, Colo NBU 92 RFEREN 21-25C MW	Onshore, rado 80202 21-25D NCE PLAT	M E 14'14"W	CONST $520^{\circ}17^{\circ}200$ $17^{\circ}05^{\circ}17^{\circ}00$	609 100000000000000000000000000000000000	(To Bottom Hole)	70 2 95.05 2 003 TI E DATE 4-7-1 DATE	MBER NGINEER 209 NORT SURVEYED: 0 E DRAWN:	LIN	AZ=8	(4: SURVEYINC NAL, UTAH 84(YY: M.S.B.	35) 789-1365 6, INC.
Kerr-Mc0 1099 1 WEL WELL P WELL LOCATE	Gee Oil & Bth Street - De L PAD - L PAD - S - NBU 92 NBU 921- D IN SECTI	& Gas Cenver, Colo NBU 92 RFEREN 21-25C M ION 25,	Onshore, rado 80202 21-25D NCE PLAT	M E 14'14"W	CONSI 2155 No Sherida Phone	OR CONTROL OF THE CON	(To Bottom Hole)	70 205.05 EOS	MBER NGINEER 209 NORT SURVEYED: 0 E DRAWN:	LIN ING ING	AZ=8 NE & LAND WEST - VER SURVEYED B	(4: SURVEYINC NAL, UTAH 840 Y: M.S.B. B.M.	35) 789-1365 6, INC.







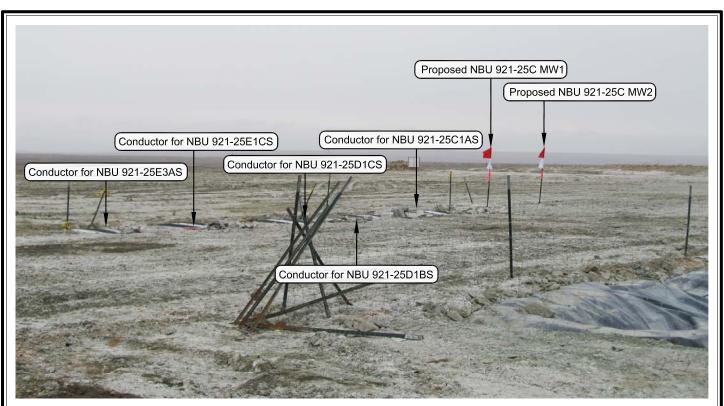


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE





PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: EASTERLY

Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-25D

LOCATION PHOTOS NBU 921-25C MW2 & NBU 921-25C MW1 **LOCATED IN SECTION 25, T9S, R21E,** S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

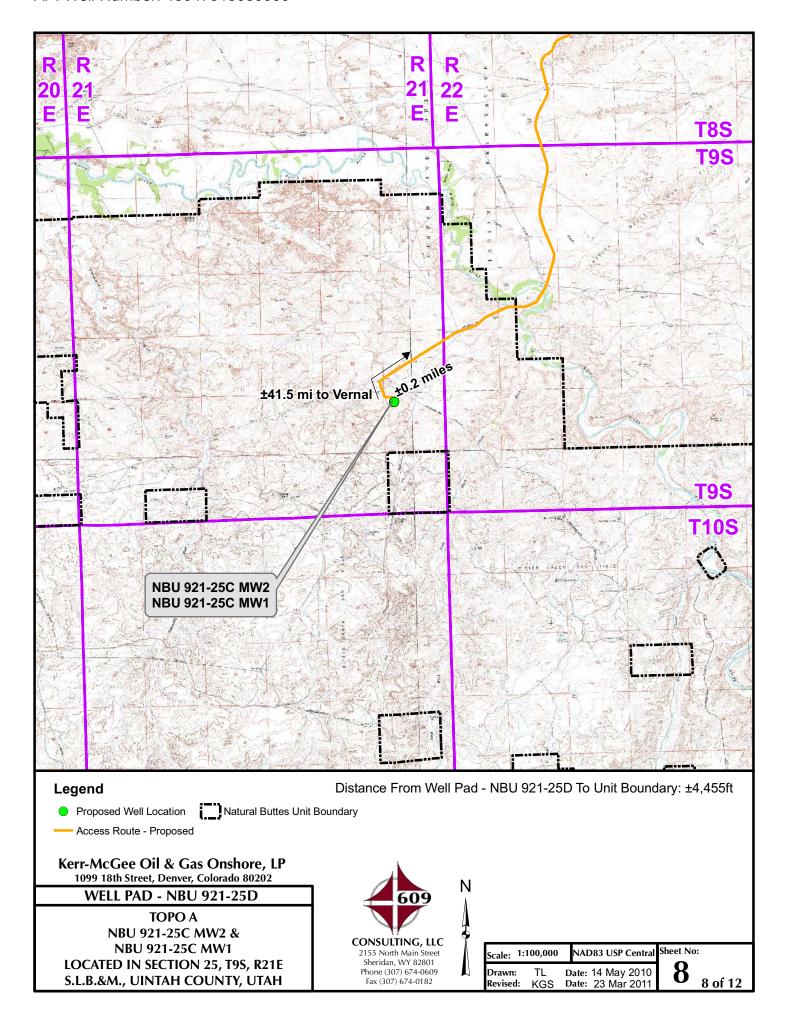
TIMBERLINE

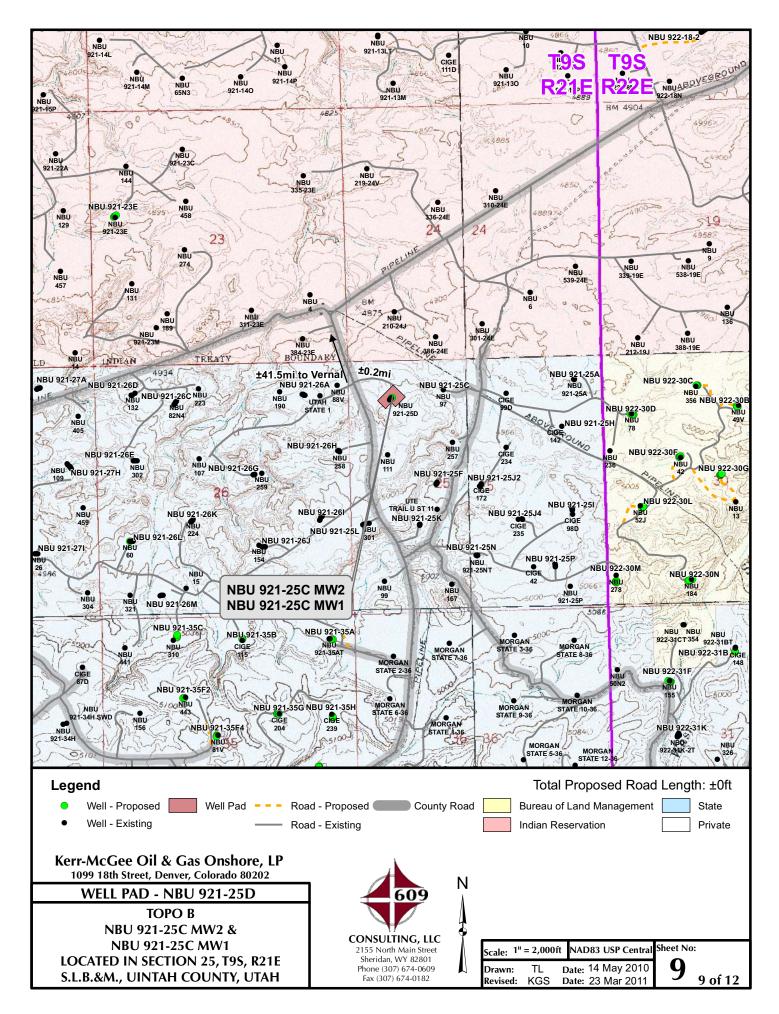
(435) 789-1365

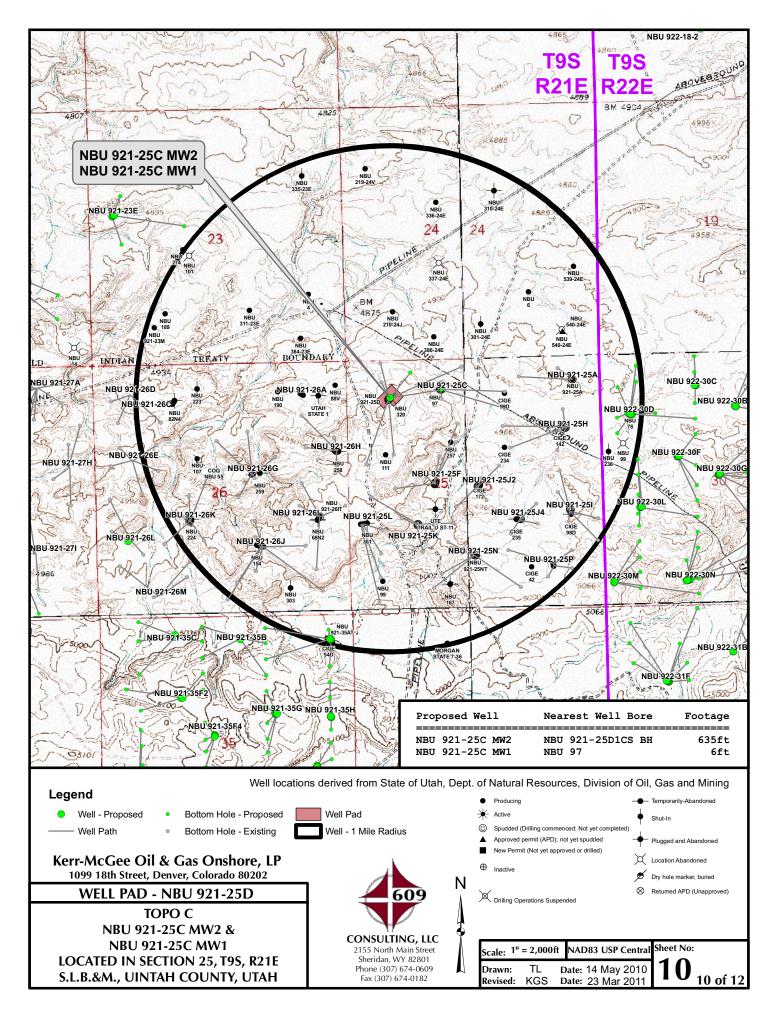
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

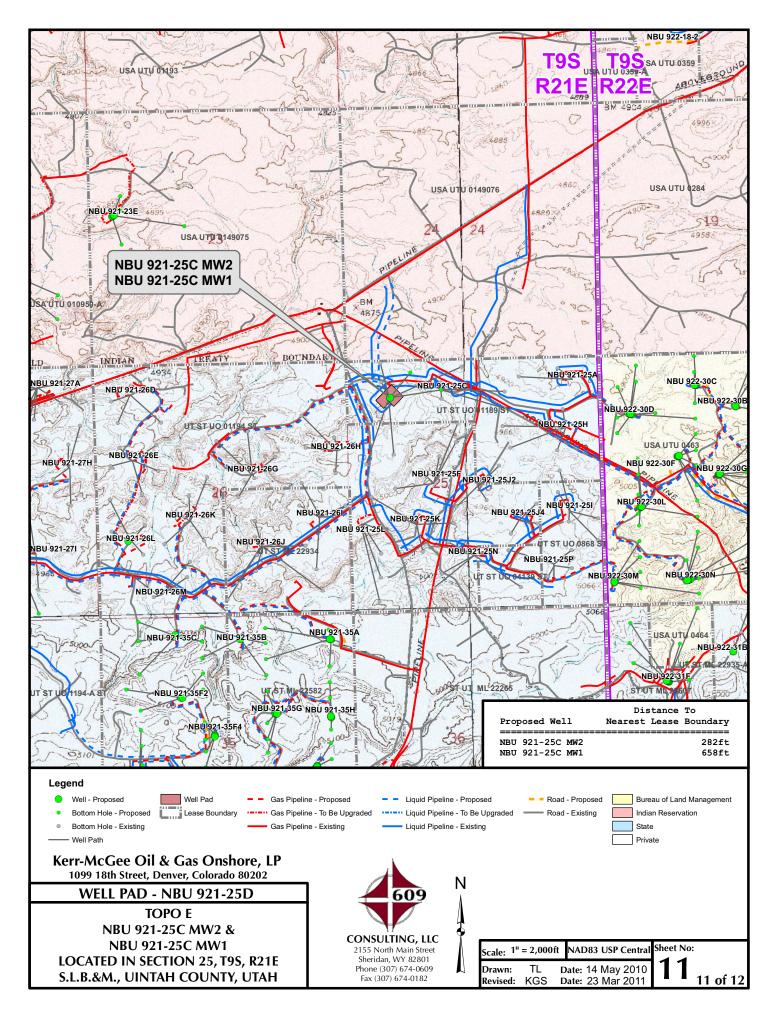
DATE PHOTOS TAKEN: SHEET NO: PHOTOS TAKEN BY: M.S.B. 03-17-11 DATE DRAWN: DRAWN BY: E.M.S. 03-21-11 Date Last Revised: 03-22-11 M.W.W.

7 OF 12









Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 921-25D WELLS – NBU 921-25C MW2 & NBU 921-25C MW1 Section 25, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.0 miles to a service road to the east. Exit left and proceed in an easterly direction along the service road approximately 0.2 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 41.7 miles in a southerly direction.

SHEET 12 OF 12

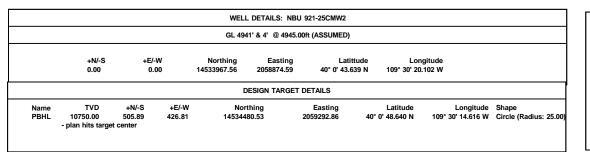
API Well Number: 430475156800@oject: Uintah County, UT UTM12 Scientific Drilling Rocky Mountain Operations

Vertical Section at 40.15° (1500 ft/in)

Site: NBU 921-25D Pad Well: NBU 921-25CMW2

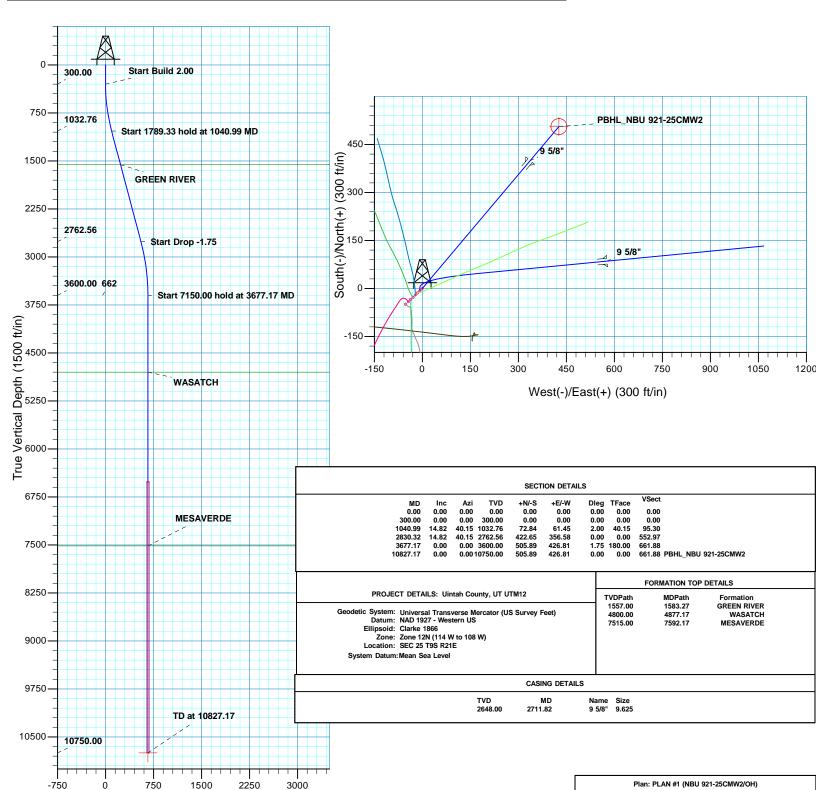
Wellbore: OH Design: PLAN #1





Azimuths to True North Magnetic North: 11.10° Magnetic Field Strength: 52353.9snT Dip Angle: 65.88° Date: 04/07/2011 Model: IGRF2010

Created By: RobertScott Date: 10:54, April 07 2011





Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25CMW2

ОН

Plan: PLAN #1

Standard Planning Report

07 April, 2011







Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Minimum Curvature

Project Uintah County, UT UTM12

Map System: Universal Transverse Mercator (US Survey Feet)

 Geo Datum:
 NAD 1927 - Western US

 Map Zone:
 Zone 12N (114 W to 108 W)

System Datum: Mean Sea Level

Site NBU 921-25D Pad, SEC 25 T9S R21E

Northing: 14,533,953.48 usft Site Position: Latitude: 40° 0' 43.502 N From: Lat/Long Easting: 2,058,860.26 usft Longitude: 109° 30' 20.290 W **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.96 13.200 in

Well NBU 921-25CMW2, 787 FNL 907 FWL

 Well Position
 +N/-S
 13.84 ft
 Northing:
 14,533,967.56 usft
 Latitude:
 40° 0' 43.639 N

 +E/-W
 14.56 ft
 Easting:
 2,058,874.59 usft
 Longitude:
 109° 30' 20.102 W

Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 4,941.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination **Dip Angle** Field Strength (nT) (°) (°) IGRF2010 04/07/2011 11.10 65.88 52.354

PLAN #1 Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 40.15

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,040.99	14.82	40.15	1,032.76	72.84	61.45	2.00	2.00	0.00	40.15	
2,830.32	14.82	40.15	2,762.56	422.65	356.58	0.00	0.00	0.00	0.00	
3,677.17	0.00	0.00	3,600.00	505.89	426.81	1.75	-1.75	0.00	180.00	
10,827.17	0.00	0.00	10,750.00	505.89	426.81	0.00	0.00	0.00	0.00	PBHL_NBU 921-25Cl





Database: Company:

Project:

EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

sign:		PLAN #1								
anned	Survey									
	Measured Depth (ft)	Inclination	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
	Start Build 2.	00								
	400.00	2.00	40.15	399.98	1.33	1.13	1.75	2.00	2.00	0.00
	500.00		10.45	100.04			0.00			0.00
	500.00	4.00	40.15	499.84	5.33	4.50	6.98	2.00	2.00	0.00
	600.00	6.00	40.15	599.45	11.99	10.12	15.69	2.00	2.00	0.00
	700.00	8.00	40.15	698.70	21.31	17.98	27.88	2.00	2.00	0.00
	800.00	10.00	40.15	797.47	33.26	28.07	43.52	2.00	2.00	0.00
	900.00	12.00	40.15	895.62	47.85	40.37	62.60	2.00	2.00	0.00
	1,000.00	14.00	40.15	993.06	65.04	54.87	85.10	2.00	2.00	0.00
	1,040.99	14.82	40.15	1,032.76	72.84	61.45	95.30	2.00	2.00	0.00
		hold at 1040.99	MD							
	1,100.00	14.82	40.15	1,089.80	84.37	71.18	110.39	0.00	0.00	0.00
	1,200.00	14.82	40.15	1,186.48	103.92	87.68	135.97	0.00	0.00	0.00
	1,300.00	14.82	40.15	1,283.15	123.47	104.17	161.55	0.00	0.00	0.00
	1,400.00	14.82	40.15	1,379.82	143.02	120.67	187.12	0.00	0.00	0.00
	1,500.00	14.82	40.15	1,476.50	162.57	137.16	212.70	0.00	0.00	0.00
	1,583.27	14.82	40.15	1,557.00	178.85	150.89	234.00	0.00	0.00	0.00
	GREEN RIVE									
	1,600.00	14.82	40.15	1,573.17	182.12	153.65	238.28	0.00	0.00	0.00
	1,700.00	14.82	40.15	1,669.84	201.67	170.15	263.86	0.00	0.00	0.00
	1,800.00	14.82	40.15	1,766.52	221.22	186.64	289.44	0.00	0.00	0.00
	1,900.00	14.82	40.15	1,863.19	240.77	203.14	315.02	0.00	0.00	0.00
	2,000.00	14.82	40.15	1,959.86	260.32	219.63	340.59	0.00	0.00	0.00
	2,100.00	14.82	40.15	2,056.54	279.87	236.12	366.17	0.00	0.00	0.00
	2,200.00	14.82	40.15	2,153.21	299.42	252.62	391.75	0.00	0.00	0.00
	2,300.00	14.82	40.15	2,249.88	318.97	269.11	417.33	0.00	0.00	0.00
	2,400.00	14.82	40.15	2,346.56	338.52	285.60	442.91	0.00	0.00	0.00
	2,500.00	14.82	40.15	2,443.23	358.07	302.10	468.48	0.00	0.00	0.00
	2,600.00	14.82	40.15	2,539.90	377.62	318.59	494.06	0.00	0.00	0.00
	2,700.00	14.82	40.15	2,636.58	397.17	335.09	519.64	0.00	0.00	0.00
	2,711.82	14.82	40.15	2,648.00	399.48	337.03	522.66	0.00	0.00	0.00
	9 5/8"									
	2,800.00	14.82	40.15	2,733.25	416.72	351.58	545.22	0.00	0.00	0.00
	2,830.32	14.82	40.15	2,762.56	422.65	356.58	552.97	0.00	0.00	0.00
	Start Drop -1.	.75								
	2,900.00	13.60	40.15	2,830.11	435.72	367.61	570.08	1.75	-1.75	0.00
	3,000.00	11.85	40.15	2,927.65	452.56	381.81	592.11	1.75	-1.75	0.00
	3,100.00	10.10	40.15	3,025.82	467.11	394.09	611.14	1.75	-1.75	0.00
	3,200.00	8.35	40.15	3,124.52	479.36	404.43	627.17	1.75	-1.75	0.00
	3,300.00	6.60	40.15	3,223.67	489.30	412.82	640.18	1.75	-1.75	0.00
	3,400.00	4.85	40.15	3,323.16	496.93	419.25	650.16	1.75	-1.75	0.00
	3,500.00	3.10	40.15	3,422.92	502.23	423.72	657.09	1.75	-1.75	0.00
	3,600.00	1.35	40.15	3,522.84	505.19	426.23	660.98	1.75	-1.75	0.00
	3,677.17	0.00	0.00	3,600.00	505.89	426.81	661.89	1.75	-1.75	0.00
		hold at 3677.17								
	3,700.00	0.00	0.00	3,622.83	505.89	426.81	661.89	0.00	0.00	0.00
	3,800.00	0.00	0.00	3,722.83	505.89	426.81	661.89	0.00	0.00	0.00
	3,900.00	0.00	0.00	3,822.83	505.89	426.81	661.89	0.00	0.00	0.00
	4,000.00	0.00	0.00	3,922.83	505.89	426.81	661.89	0.00	0.00	0.00
	4,100.00	0.00	0.00	4,022.83	505.89	426.81	661.89	0.00	0.00	0.00





Database: Company: Project:

Site:

EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad

Well: NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Design:	PLAN #1									
Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,200.00	0.00	0.00	4,122.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,222.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,322.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,422.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,522.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,622.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,722.83	505.89	426.81	661.89	0.00	0.00	0.00	
4,877.17	0.00	0.00	4,800.00	505.89	426.81	661.89	0.00	0.00	0.00	
WASATCH										
4,900.00	0.00	0.00	4,822.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,922.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,022.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,122.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,222.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,322.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,422.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,522.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,622.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,722.83	505.89	426.81	661.89	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,822.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,922.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,022.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,122.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,222.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,322.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,422.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,522.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,622.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,722.83	505.89	426.81	661.89	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,822.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,922.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,022.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,122.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,222.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,322.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,422.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,592.17	0.00	0.00	7,515.00	505.89	426.81	661.89	0.00	0.00	0.00	
MESAVERDE	•									
7,600.00	0.00	0.00	7,522.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,622.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,722.83	505.89	426.81	661.89	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,822.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,922.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,022.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,122.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,222.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,322.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,422.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,522.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,622.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,722.83	505.89	426.81	661.89	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,822.83	505.89	426.81	661.89	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,922.83	505.89	426.81	661.89	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,022.83	505.89	426.81	661.89	0.00	0.00	0.00	





Database: Company: Project:

Site:

Well:

EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,200.00	0.00	0.00	9,122.83	505.89	426.81	661.89	0.00	0.00	0.00
9,300.00	0.00	0.00	9,222.83	505.89	426.81	661.89	0.00	0.00	0.00
9,400.00	0.00	0.00	9,322.83	505.89	426.81	661.89	0.00	0.00	0.00
9,500.00	0.00	0.00	9,422.83	505.89	426.81	661.89	0.00	0.00	0.00
9,600.00	0.00	0.00	9,522.83	505.89	426.81	661.89	0.00	0.00	0.00
9,700.00	0.00	0.00	9,622.83	505.89	426.81	661.89	0.00	0.00	0.00
9,800.00	0.00	0.00	9,722.83	505.89	426.81	661.89	0.00	0.00	0.00
9,900.00	0.00	0.00	9,822.83	505.89	426.81	661.89	0.00	0.00	0.00
10,000.00	0.00	0.00	9,922.83	505.89	426.81	661.89	0.00	0.00	0.00
10,100.00	0.00	0.00	10,022.83	505.89	426.81	661.89	0.00	0.00	0.00
10,200.00	0.00	0.00	10,122.83	505.89	426.81	661.89	0.00	0.00	0.00
10,300.00	0.00	0.00	10,222.83	505.89	426.81	661.89	0.00	0.00	0.00
10,400.00	0.00	0.00	10,322.83	505.89	426.81	661.89	0.00	0.00	0.00
10,500.00	0.00	0.00	10,422.83	505.89	426.81	661.89	0.00	0.00	0.00
10,600.00	0.00	0.00	10,522.83	505.89	426.81	661.89	0.00	0.00	0.00
10,700.00	0.00	0.00	10,622.83	505.89	426.81	661.89	0.00	0.00	0.00
10,800.00	0.00	0.00	10,722.83	505.89	426.81	661.89	0.00	0.00	0.00
10,827.17	0.00	0.00	10,750.00	505.89	426.81	661.89	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-25CMV - plan hits target cent - Circle (radius 25.00		0.00	10,750.00	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W

Casing Points						
	Measured	Vertical		Casing	Hole	
	Depth	Depth		Diameter	Diameter	
	(ft)	(ft)	Name	(in)	(in)	
	2,711.82	2,648.00 9 5/8"		9.625	12.250	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,583.27	1,557.00	GREEN RIVER				
	4,877.17	4,800.00	WASATCH				
	7,592.17	7,515.00	MESAVERDE				



SDIPlanning Report



Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Minimum Curvature

Plan Annotations					
Me	asured	Vertical	Local Coor	dinates	
ſ	Depth	Depth	+N/-S	+E/-W	
	(ft)	(ft)	(ft)	(ft)	Comment
	300.00	300.00	0.00	0.00	Start Build 2.00
	1,040.99	1,032.76	72.84	61.45	Start 1789.33 hold at 1040.99 MD
	2,830.32	2,762.56	422.65	356.58	Start Drop -1.75
	3,677.17	3,600.00	505.89	426.81	Start 7150.00 hold at 3677.17 MD
1	0,827.17	10,750.00	505.89	426.81	TD at 10827.17



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25CMW2

OH

Plan: PLAN #1

Standard Planning Report - Geographic

07 April, 2011





SDIPlanning Report - Geographic



Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Minimum Curvature

Project Uintah County, UT UTM12

Map System: Universal Transverse Mercator (US Survey Feet)

Geo Datum: NAD 1927 - Western US

Map Zone: Zone 12N (114 W to 108 W)

System Datum: Mean Sea Level

Site NBU 921-25D Pad, SEC 25 T9S R21E

14,533,953.48 usft Northing: Site Position: Latitude: 40° 0' 43.502 N 109° 30' 20.290 W 2,058,860.26 usft Lat/Long Easting: From: Longitude: Position Uncertainty: 0.96 0.00 ft Slot Radius: 13.200 in **Grid Convergence:**

Well NBU 921-25CMW2, 787 FNL 907 FWL **Well Position** +N/-S 0.00 ft Northing: 14,533,967.56 usft Latitude: 40° 0' 43.639 N +E/-W 0.00 ft Easting: 2,058,874.59 usft Longitude: 109° 30' 20.102 W Wellhead Elevation: **Position Uncertainty** 0.00 ft **Ground Level:** 4,941.00 ft

ОН Wellbore Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (°) (°) (nT) 65.88 IGRF2010 04/07/2011 11.10 52,354

PLAN #1 Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 40.15

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,040.99	14.82	40.15	1,032.76	72.84	61.45	2.00	2.00	0.00	40.15	
2,830.32	14.82	40.15	2,762.56	422.65	356.58	0.00	0.00	0.00	0.00	
3,677.17	0.00	0.00	3,600.00	505.89	426.81	1.75	-1.75	0.00	180.00	
10,827.17	0.00	0.00	10,750.00	505.89	426.81	0.00	0.00	0.00	0.00	PBHL_NBU 921-25CI



Company:

SDIPlanning Report - Geographic



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

sign:	FLAN								
anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,533,967.56	2,058,874.59	40° 0' 43.639 N	109° 30' 20.102 \
100.00	0.00	0.00	100.00	0.00	0.00	14,533,967.56	2,058,874.59	40° 0' 43.639 N	109° 30' 20.102 \
200.00	0.00	0.00	200.00	0.00	0.00	14,533,967.56	2,058,874.59	40° 0' 43.639 N	109° 30' 20.102 \
300.00	0.00	0.00	300.00	0.00	0.00	14,533,967.56	2,058,874.59	40° 0' 43.639 N	109° 30' 20.102 \
Start Bui	ild 2.00								
400.00	2.00	40.15	399.98	1.33	1.13	14,533,968.92	2,058,875.69	40° 0' 43.652 N	109° 30' 20.088
500.00	4.00	40.15	499.84	5.33	4.50	14,533,972.97	2,058,879.00	40° 0' 43.692 N	109° 30' 20.045
600.00	6.00	40.15	599.45	11.99	10.12	14,533,979.73	2,058,884.50	40° 0' 43.758 N	109° 30' 19.972
700.00	8.00	40.15	698.70	21.31	17.98	14,533,989.17	2,058,892.20	40° 0' 43.850 N	109° 30' 19.871
800.00	10.00	40.15	797.47	33.26	28.07	14,534,001.29	2,058,902.09	40° 0' 43.968 N	109° 30' 19.742
900.00	12.00	40.15	895.62	47.85	40.37	14,534,016.08	2,058,914.15	40° 0' 44.112 N	109° 30' 19.583
1,000.00	14.00	40.15	993.06	65.04	54.87	14,534,033.51	2,058,928.36	40° 0' 44.282 N	109° 30' 19.397
1,040.99	14.82	40.15	1,032.76	72.84	61.45	14,534,041.42	2,058,934.81	40° 0' 44.359 N	109° 30' 19.312
	9.33 hold at 1								
1,100.00	14.82	40.15	1,089.80	84.37	71.18	14,534,053.12	2,058,944.35	40° 0' 44.473 N	109° 30' 19.187
1,200.00	14.82	40.15	1,186.48	103.92	87.68	14,534,072.94	2,058,960.51	40° 0' 44.666 N	109° 30' 18.975
1,300.00	14.82	40.15	1,283.15	123.47	104.17	14,534,092.76	2,058,976.67	40° 0' 44.860 N	109° 30' 18.763
1,400.00	14.82	40.15	1,379.82	143.02	120.67	14,534,112.59	2,058,992.84	40° 0' 45.053 N	109° 30' 18.551
1,500.00	14.82	40.15	1,476.50	162.57	137.16	14,534,132.41	2,059,009.00	40° 0' 45.246 N	109° 30' 18.339
1,583.27	14.82	40.15	1,557.00	178.85	150.89	14,534,148.92	2,059,022.46	40° 0' 45.407 N	109° 30' 18.163
GREEN I									
1,600.00	14.82	40.15	1,573.17	182.12	153.65	14,534,152.24	2,059,025.16	40° 0' 45.439 N	109° 30' 18.127
1,700.00	14.82	40.15	1,669.84	201.67	170.15	14,534,172.06	2,059,041.33	40° 0' 45.633 N	109° 30' 17.915
1,800.00	14.82	40.15	1,766.52	221.22	186.64	14,534,191.88	2,059,057.49	40° 0' 45.826 N	109° 30' 17.703
1,900.00	14.82	40.15	1,863.19	240.77	203.14	14,534,211.71	2,059,073.65	40° 0' 46.019 N	109° 30' 17.491
2,000.00	14.82	40.15	1,959.86	260.32	219.63	14,534,231.53	2,059,089.82	40° 0' 46.212 N	109° 30' 17.279
2,100.00	14.82	40.15	2,056.54	279.87	236.12	14,534,251.35	2,059,105.98	40° 0' 46.406 N	109° 30' 17.067
2,200.00	14.82	40.15	2,153.21	299.42	252.62	14,534,271.18	2,059,122.14	40° 0' 46.599 N	109° 30' 16.855
2,300.00	14.82	40.15	2,249.88	318.97	269.11	14,534,291.00	2,059,138.31	40° 0' 46.792 N	109° 30' 16.643
2,400.00	14.82	40.15	2,346.56	338.52	285.60	14,534,310.82	2,059,154.47	40° 0' 46.985 N	109° 30' 16.431
2,500.00	14.82	40.15	2,443.23	358.07	302.10	14,534,330.65	2,059,170.64	40° 0' 47.179 N	109° 30' 16.219
2,600.00	14.82	40.15	2,539.90	377.62	318.59	14,534,350.47	2,059,186.80	40° 0' 47.372 N 40° 0' 47.565 N	109° 30' 16.007
2,700.00	14.82	40.15	2,636.58	397.17	335.09	14,534,370.30 14,534,372.64	2,059,202.96		109° 30' 15.795 109° 30' 15.770
2,711.82	14.82	40.15	2,648.00	399.48	337.03	14,554,572.64	2,059,204.87	40° 0' 47.588 N	109 30 15.770
9 5/8"	14.00	40.45	0.700.05	440.70	254.50	44 504 200 40	0.050.040.40	40° 01 47 750 N	4000 20145 502
2,800.00	14.82	40.15	2,733.25	416.72	351.58	14,534,390.12	2,059,219.13	40° 0' 47.758 N	109° 30' 15.583
2,830.32	14.82	40.15	2,762.56	422.65	356.58	14,534,396.13	2,059,224.03	40° 0' 47.817 N	109° 30' 15.519
Start Dro	•	40.15	2 020 11	42E 72	267.61	14 524 400 20	2.050.224.04	40° 0' 47 046 N	100° 20' 15 277
2,900.00	13.60	40.15 40.15	2,830.11 2,927.65	435.72 452.56	367.61 381.81	14,534,409.39	2,059,234.84	40° 0' 47.946 N	109° 30' 15.377
3,000.00 3,100.00	11.85	40.15 40.15	3,025.82	452.56 467.11	381.81 394.09	14,534,426.46	2,059,248.76 2,059,260.79	40° 0' 48.112 N 40° 0' 48.256 N	109° 30' 15.194 109° 30' 15.037
3,200.00	10.10 8.35	40.15	3,025.62	479.36	404.43	14,534,441.21 14,534,453.64	2,059,260.79	40° 0' 48.377 N	109° 30′ 15.037
3,300.00	6.60	40.15	3,124.52	489.30	412.82	14,534,463.72	2,059,270.92	40° 0' 48.476 N	109° 30' 14.796
3,400.00	4.85	40.15	3,323.16	496.93	419.25	14,534,471.45	2,059,279.14	40° 0' 48.551 N	109° 30' 14.713
3,500.00	3.10	40.15	3,422.92	502.23	423.72	14,534,476.82	2,059,289.82	40° 0' 48.603 N	109° 30' 14.656
3,600.00	1.35	40.15	3,522.84	505.19	426.23	14,534,479.83	2,059,292.28	40° 0' 48.633 N	109° 30' 14.624
3,677.17	0.00	0.00	3,600.00	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
	0.00 hold at 3					, ,			
3,700.00	0.00	0.00	3,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
3,800.00	0.00	0.00	3,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
3,900.00	0.00	0.00	3,822.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
4,000.00	0.00	0.00	3,922.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
4,100.00	0.00	0.00	4,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
4,200.00	0.00	0.00	4,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616



Company:

SDIPlanning Report - Geographic



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Design:	PLAN	l #1							
Planned Survey	1								
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,300.00	0.00	0.00	4,222.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
4,400.00		0.00	4,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
4,500.00		0.00	4,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
4,600.00		0.00	4,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
4,700.00	0.00	0.00	4,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
4,800.00		0.00	4,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
4,877.17		0.00	4,800.00	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
WASAT	СН								
4,900.00	0.00	0.00	4,822.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,000.00	0.00	0.00	4,922.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,100.00	0.00	0.00	5,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,200.00	0.00	0.00	5,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,300.00	0.00	0.00	5,222.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,400.00	0.00	0.00	5,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,500.00	0.00	0.00	5,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,600.00		0.00	5,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,700.00	0.00	0.00	5,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,800.00	0.00	0.00	5,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
5,900.00		0.00	5,822.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,000.00		0.00	5,922.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,100.00		0.00	6,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,200.00	0.00	0.00	6,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,300.00	0.00	0.00	6,222.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,400.00		0.00	6,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,500.00	0.00	0.00	6,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,600.00		0.00	6,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,700.00		0.00	6,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
6,800.00		0.00	6,722.83 6,822.83	505.89 505.89	426.81 426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W 109° 30' 14.616 W
6,900.00 7,000.00		0.00 0.00	6,922.83	505.89	426.81	14,534,480.54 14,534,480.54	2,059,292.85 2,059,292.85	40° 0' 48.640 N 40° 0' 48.640 N	109° 30' 14.616 W
7,100.00		0.00	7,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,100.00		0.00	7,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,300.00	0.00	0.00	7,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,400.00		0.00	7,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,500.00		0.00	7,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,592.17		0.00	7,515.00	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
MESAVE	ERDE								
7,600.00	0.00	0.00	7,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,700.00	0.00	0.00	7,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,800.00		0.00	7,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
7,900.00	0.00	0.00	7,822.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,000.00	0.00	0.00	7,922.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,100.00	0.00	0.00	8,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,200.00	0.00	0.00	8,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,300.00	0.00	0.00	8,222.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,400.00		0.00	8,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,500.00		0.00	8,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,600.00		0.00	8,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,700.00		0.00	8,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,800.00		0.00	8,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
8,900.00		0.00	8,822.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
9,000.00	0.00	0.00	8,922.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
9,100.00		0.00	9,022.83	505.89 505.80	426.81 426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W
9,200.00	0.00	0.00	9,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W



SDIPlanning Report - Geographic



Database: Company: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,300.00	0.00	0.00	9,222.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 \
9,400.00	0.00	0.00	9,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
9,500.00	0.00	0.00	9,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
9,600.00	0.00	0.00	9,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
9,700.00	0.00	0.00	9,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
9,800.00	0.00	0.00	9,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
9,900.00	0.00	0.00	9,822.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,000.00	0.00	0.00	9,922.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,100.00	0.00	0.00	10,022.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,200.00	0.00	0.00	10,122.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,300.00	0.00	0.00	10,222.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,400.00	0.00	0.00	10,322.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,500.00	0.00	0.00	10,422.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,600.00	0.00	0.00	10,522.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,700.00	0.00	0.00	10,622.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,800.00	0.00	0.00	10,722.83	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
10,827.17	0.00	0.00	10,750.00	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616
PBHL_N	BU 921-25CM	W2							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-25CMV - plan hits target cent - Circle (radius 25.00		0.00	10,750.00	505.89	426.81	14,534,480.54	2,059,292.85	40° 0' 48.640 N	109° 30' 14.616 W

Casing Points						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
	2,711.82	2,648.00 9 5/8"	Name	9.625	12.250	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,583.27	1,557.00	GREEN RIVER				
	4,877.17	4,800.00	WASATCH				
	7,592.17	7,515.00	MESAVERDE				



SDIPlanning Report - Geographic



Database: EDM5000-RobertS-Local

Company: Kerr McGee Oil and Gas Onshore LP

 Project:
 Uintah County, UT UTM12

 Site:
 NBU 921-25D Pad

 Well:
 NBU 921-25CMW2

Wellbore: OH
Design: PLAN #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & 4' @ 4945.00ft (ASSUMED) GL 4941' & 4' @ 4945.00ft (ASSUMED)

True

Minimum Curvature

Plan Annotations					
Meas	sured	Vertical	Local Coor	dinates	
Dep	pth	Depth	+N/-S	+E/-W	
(fi	t)	(ft)	(ft)	(ft)	Comment
3	300.00	300.00	0.00	0.00	Start Build 2.00
1,0	040.99	1,032.76	72.84	61.45	Start 1789.33 hold at 1040.99 MD
2,8	830.32	2,762.56	422.65	356.58	Start Drop -1.75
3,6	677.17	3,600.00	505.89	426.81	Start 7150.00 hold at 3677.17 MD
10,8	827.17	10,750.00	505.89	426.81	TD at 10827.17

NBU 921-25C1AS

Surface: 800' FNL 893' FWL (NW/4NW/4) BHL: 190' FNL 2,405' FWL (NE/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25D1BS

Surface: 807' FNL 885' FWL (NW/4NW/4) BHL: 60' FNL 716' FWL (NW/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25D1CS

Surface: 814' FNL 878' FWL (NW/4NW/4) BHL: 460' FNL 726' FWL (NW/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25E1CS

Surface: 821' FNL 871' FWL (NW/4NW/4) BHL: 1,976' FNL 947' FWL (SW/4NW/4) Mineral Lease: UO 1194 ST

NBU 921-25E3AS

Surface: 828' FNL 864' FWL (NW/4NW/4) BHL: 2,162' FNL 371' FWL (SW/4NW/4) Mineral Lease: UO 1194 ST

NBU 921-25C MW1

Surface: 793' FNL 900' FWL (NW/4NW/4) BHL: 658' FNL 1,975' FWL (NE/4NW/4) Mineral Lease: UO 1189 ST

NBU 921-25C MW2

Surface: 787' FNL 907' FWL (NW/4NW/4) BHL: 282' FNL 1,335' FWL (NE/4NW/4) Mineral Lease: UO 1189 ST

> Pad: NBU 921-25D Section 25 T9S R21E

Uintah County, Utah Operator: Kerr-McGee Oil & Gas Onshore LP

MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

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KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. **Existing Roads:**

Existing roads consist of county roads and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

No new access road to this pad location is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are to be reconstructed they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

C. <u>Location of Existing and Proposed Facilities:</u>

This pad will expand the existing pad for the NBU 921-25D, which is a temporarily abandoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of April 19, 2011.

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

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Production facilities (see Well Pad Design Summary and Facilities Diagram): Not applicable for Monitor Wells (MW 1 & MW2).

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks) from the producing wells on location. The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.

Gathering facilities: Not applicable for Monitor wells.

D. <u>Location and Type of Water Supply</u>:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. <u>Methods of Handling Waste Materials</u>:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

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RNI in Sec. 5 T9S R22E

Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 33 T9S R21E NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

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Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, and drilling will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and where State wells are participatory to a Federal agreement, according to NTL-3A.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. <u>Ancillary Facilities</u>:

None are anticipated.

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

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H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit, access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

Page 7

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well or monitor well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for revegetation. The site specific seed mix will be provided by SITLA.

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

Page 8

J. <u>Surface/Mineral Ownership</u>:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

K. Other Information:

A Class I literature survey has been conducted by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-125.

A paleontological reconnaissance has been completed by Intermountain Paleo-Consulting (IPC) and a report will be provided under separate cover.

A biological field survey was completed by Grasslands Consulting, Inc. on July 13, 2010. For additional details please refer to report GCI-289.

Surface Use Plan of Operations

NBU 921-25C1AS / 25D1BS/ 25D1CS/ 25E1CS/ 25E3AS/25C MW1/25C MW2

Page 9

M. Lessee's or Operators' Representative & Certification:

Andy Lytle Regulatory Analyst I Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6100 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

12	
	April 25, 2011
Andy Lytle	Date



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

April 7, 2011

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-25C MW2 (Pressure Monitor Well)

T9S-R21E

Section 25: NWNW (Surf), NENW (Bottom)

Surface: 787' FNL, 907' FWL Bottom Hole: 282' FNL, 1335' FWL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-25C MW2 pressure monitor well is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing well pads and roads in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney Sr. Staff Landman

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

April 29, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

NBU 921-25D Pad

43-047-51567 NBU 921-25C MW1 Sec 25 T09S R21E 0793 FNL 0900 FWL BHL Sec 25 T09S R21E 0658 FNL 1975 FWL

43-047-51568 NBU 921-25C MW2 Sec 25 T09S R21E 0787 FNL 0907 FWL BHL Sec 25 T09S R21E 0282 FNL 1335 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

DN: cn=Michael L. Coulthard, o=Burea

Management, ou=Branch of Minerals,
email=Michael Coulthard@blm.gov.c

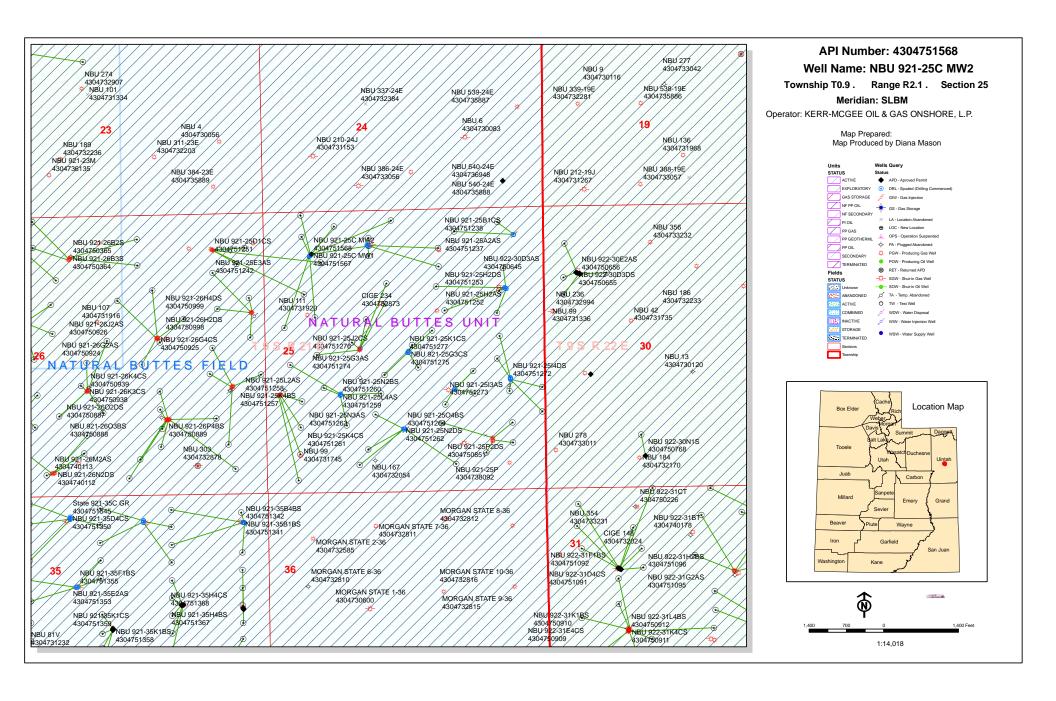
Digitally signed by Michael L. Coulthard DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US Date: 2011.04.29 13:48:30 -06'00'

bcc: File - Natural Buttes Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:4-29-11



From: Jim Davis

To: Hill, Brad; Mason, Diana

CC: Andrew.Lytle@anadarko.com; Bonner, Ed; Garrison, LaVonne

Date: 5/3/2011 8:38 AM

Subject: Fwd: Submission of 2 State APD's

SITLA approves these two APDs. Arch and paleo surveys were submitted and approved on the existing well pad. No new surface disturbance will be made.

NBU 921-25C MW1 (4304751567) NBU 921-25C MW2 (4304751568)

-Jim

>>> "Lytle, Andrew" < Andrew.Lytle@anadarko.com > 4/28/2011 9:06 AM >>> Hi Jim.

I submitted 2 APD's this morning on UDOGM's website. These 2 wells will be monitor wells and will not be producers. They will be additional wells added and drilled off the previously approved NBU 921-25D pad. Since this pad has already been onsited and approved will it be necessary to onsite these wells? There will be no additional ground disturbance.

Let me know when you get a chance. Thanks!

Andy

APD's submitted:

NBU 921-25C MW1 NBU 921-25C MW2

Andy Lytle
Anadarko E&P Company, LP
Direct: 720-929-6100
Fax: 720-929-7100
andrew.lytle@anadarko.com

</PRE>

>

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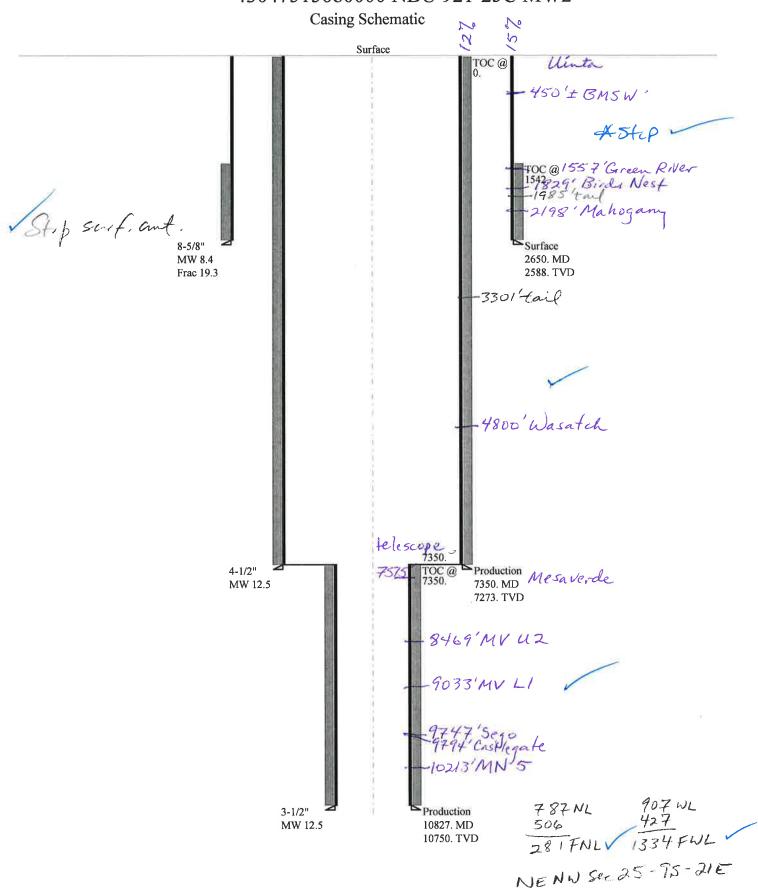
<PRE>

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-25C MW2 43047515680000

| Well Name | | KERR-MCGE | E C | OIL & GAS ON | SH | ORE, L.P. N | IBU | 921-25C MW | |
|-----------------------------|-----------------------|----------------|----------------|--------------|------------|-------------|---------|-----------------|---|
| String | | Surf | F | Prod | L | 1 | Ī | | |
| Casing Size(") | | 8.625 | 4 | 4.500 | 3. | .500 | Ť | | |
| Setting Depth (TVD) | | 2588 | 17 | 7273 | 10 | 0750 | Ť | | |
| Previous Shoe Setting Dept | th (TVD) | 40 | | 2588 | 7: | 273 | İ | | |
| Max Mud Weight (ppg) | | 8.4 | T ₁ | 12.5 | 1: | 2.5 | Ť | | |
| BOPE Proposed (psi) | | 1000 | 愷 | 5000 | - | 000 | Ť | | |
| Casing Internal Yield (psi) | | 3390 | H | 7780 | - | 0160 | ľ | | |
| Operators Max Anticipated | d Pressure (psi) | 6865 | ľ | | - | 2.3 | ľ | | |
| | | | 12- | | - | | 1. | | |
| Calculations | Suri | f String | | D4l-*MI | 7_ | 8.62 | 25
= | | |
| Max BHP (psi) | | .052*Settii | ing | Depth*MW | | 1130 | 4 | DODE Ado | quate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max | x BHP-(0.12* | *Se | etting Denth | = | 040 | = | | |
| MASP (Gas/Mud) (psi) | | x BHP-(0.22*) | | | - | 819 | ╡ | YES | air drill - diverter |
| MASI (Gas/Muu) (psi) | IVIa | X BHF-(0.22*) | 36 | tting Deptin | - | 561 | 4 | YES *Con Full 1 | Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP22*(Setting D | epth - Previou | us s | Shoe Denth | = | 569 | = | NO NO | Reasonable depth in area |
| Required Casing/BOPE Te | | -P | | | + | - | ╡ | psi | Reasonable depth in area |
| *Max Pressure Allowed @ | | | _ | | 4 | 2373 | ╡ | - | ımes 1psi/ft frac gradient |
| Max 1 ressure Anowed (a) | Trevious Casing Shoe- | | _ | | _ | 40 | _ | psi Asst | inies Tpsi/it frac grautent |
| Calculations | Proc | d String | | | | 4.50 | 00 | " | |
| Max BHP (psi) | | .052*Settii | ing | Depth*MW | /= | 4727 | | | |
| | | | | | | | | BOPE Ade | quate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max | x BHP-(0.12* | *Se | tting Depth) |)= | 3854 | | YES | |
| MASP (Gas/Mud) (psi) | Max | x BHP-(0.22* | *Se | tting Depth) |)= | 3127 | | YES | ОК |
| | | | | | | | | *Can Full l | Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP22*(Setting D | epth - Previou | us S | Shoe Depth) |)= | 3696 | | NO | Reasonable |
| Required Casing/BOPE Te | | | | | 4 | 5000 | ╝ | psi | |
| *Max Pressure Allowed @ | Previous Casing Shoe= | | | | | 2588 | | psi *Assu | ımes 1psi/ft frac gradient |
| Calculations | L1 | String | _ | | | 3.50 | 00 | " | |
| Max BHP (psi) | | .052*Settii | ing | Depth*MW | 7= | 6988 | ╗ | | |
| | | | | | | | | BOPE Ade | quate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max | x BHP-(0.12* | *Se | tting Depth) |)=[| 5698 | | NO | |
| MASP (Gas/Mud) (psi) | Max | x BHP-(0.22* | 'Se | tting Depth) |)=[| 4623 | ╗ | YES | ОК |
| | | | | | | | | *Can Full l | Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP22*(Setting D | epth - Previou | us S | Shoe Depth) |)=[| 6223 | | YES | ОК |
| Required Casing/BOPE Te | st Pressure= | | | | | 5000 | | psi | |
| *Max Pressure Allowed @ | Previous Casing Shoe= | | | | | 7273 | | psi *Assu | ımes 1psi/ft frac gradient |
| Calculations | | tring | _ | | | | | " | |
| Max BHP (psi) | 5 | | ing | Depth*MW | / <u>_</u> | | = | | |
| * / | | | _ | - | 7 | l. | _ | BOPE Ade | quate For Drilling And Setting Casing at Depth? |
| MASP (Gas) (psi) | Max | x BHP-(0.12* | Se | tting Depth) |)= | | 7 | NO | |
| MASP (Gas/Mud) (psi) | Max | x BHP-(0.22* | *Se | etting Depth |)= | | Ē | NO | |
| | | | | | 7 | 1- | _ | 1 | Expected Pressure Be Held At Previous Shoe? |
| Pressure At Previous Shoe | Max BHP22*(Setting D | epth - Previou | us S | Shoe Depth |)= | | 7 | NO | [i |
| Required Casing/BOPE Te | est Pressure= | | | | 7 | | Ē | psi | |
| | | | | | _ | 1- | _ | | |

*Max Pressure Allowed @ Previous Casing Shoe= psi *Assumes 1psi/ft frac gradient

43047515680000 NBU 921-25C MW2



Well name:

43047515680000 NBU 921-25C MW2

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Surface

Project ID: 43-047-51568

Location:

UINTAH

COUNTY

Environment: Design parameters: Minimum design factors: Collapse Collapse: H2S considered? No 74 °F Mud weight: 8.400 ppg Design factor 1.125 Surface temperature: 110 °F Design is based on evacuated pipe. Bottom hole temperature: 1.40 °F/100ft Temperature gradient:

Minimum section length: 100 ft

Burst:

Design factor

1.00 Cement top: 1,542 ft

Burst

Max anticipated surface

pressure: 2,332 psi Internal gradient: 0.120 psi/ft Calculated BHP 2,643 psi

No backup mud specified.

Tension: 1.80 (J) 8 Round STC: Kick-off point 1.70 (J) 8 Round LTC:

Buttress: 1.60 (J) Premium: 1.50 (J) Body yield: 1.50 (B)

Tension is based on air weight. Neutral point: 2,318 ft Directional Info - Build & Drop

300 ft Departure at shoe: 507 ft Maximum dogleg: 2 °/100ft 14.82° Inclination at shoe:

Re subsequent strings:

Next setting depth: 10,750 ft Next mud weight: 12.500 ppg Next setting BHP: 6,980 psi Fracture mud wt: 19.250 ppg Fracture depth: 2,650 ft Injection pressure: 2,650 psi

348

4.80 J

Nominal End True Vert Measured Drift Est. Run Segment Depth Length Size Weight Grade **Finish** Depth Diameter Cost Seq (ft) (ft) (in) (lbs/ft) (ft) (in) (\$) 2650 8.625 28.00 I-55 LT&C 2588 2650 7.892 104940 1 Run Collapse Collapse Collapse **Burst** Burst **Burst Tension Tension** Tension Strength Strength Design Strength Design Seq Load Design Load Load (psi) (psi) **Factor** (psi) (psi) **Factor** (kips) (kips) **Factor**

3390

1.28

72.5

2643

Prepared

by:

Helen Sadik-Macdonald

Div of Oil, Gas & Mining

1880

1.665

Phone: 801 538-5357 FAX: 801-359-3940

Date: May 3,2011 Salt Lake City, Utah

Remarks:

1

1129

Collapse is based on a vertical depth of 2588 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:

43047515680000 NBU 921-25C MW2

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Production

Project ID: 43-047-51568

Location:

UINTAH

COUNTY

Design parameters:

Collapse

Mud weight: Design is based on evacuated pipe.

Minimum design factors: Collapse: 12.500 ppg

Design factor

1.125

Environment: H2S considered?

Surface temperature:

No 74 °F

Bottom hole temperature: Temperature gradient:

176 °F 1.40 °F/100ft

Minimum section length:

100 ft

Burst:

Tension:

Design factor

8 Round STC:

8 Round LTC:

1.00

Cement top:

Surface

Burst

Max anticipated surface

pressure: Internal gradient: Calculated BHP

3,123 psi 0.220 psi/ft

4,723 psi

No backup mud specified.

Buttress:

Premium: Body yield: 1.80 (J) 1.60 (J) 1.50 (J)

1.80 (J)

1.60 (B)

Directional Info - Build & Drop

Kick-off point 300 ft Departure at shoe: 662 ft Maximum dogleg:

Inclination at shoe:

2 °/100ft 0 °

Tension is based on air weight.

Neutral point:

5.991 ft

| Run
Seq | Segment
Length
(ft) | Size
(in) | Nominal
Weight
(Ibs/ft) | Grade | End
Finish | True Vert
Depth
(ft) | Measured
Depth
(ft) | Drift
Diameter
(in) | Est.
Cost
(\$) |
|------------|---------------------------|-------------------------------|-------------------------------|------------------------|----------------------------|----------------------------|---------------------------|-------------------------------|-----------------------------|
| 1 | 7350 | 4.5 | 11.60 | I-80 | LT&C | 7273 | 7350 | 3.875 | 97020 |
| Run
Seq | Collapse
Load
(psi) | Collapse
Strength
(psi) | Collapse
Design
Factor | Burst
Load
(psi) | Burst
Strength
(psi) | Burst
Design
Factor | Tension
Load
(kips) | Tension
Strength
(kips) | Tension
Design
Factor |
| 1 | 4723 | 6360 | 1.347 | 4723 | 7780 | 1.65 | 84.4 | 212 | 2.51 J |

Prepared

by:

Helen Sadik-Macdonald

Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: May 3,2011 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 7273 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:

43047515680000 NBU 921-25C MW2

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Production Liner

Project ID:

Location:

UINTAH

43-047-51568

Environment:

COUNTY

Design parameters: Collapse

Mud weight: 12.500 ppg Design is based on evacuated pipe.

Minimum design factors:

Collapse: Design factor

1.125

H2S considered?

74 °F Surface temperature: 224 °F Bottom hole temperature:

1.40 °F/100ft Temperature gradient: Minimum section length: 1,000 ft

Burst:

Design factor

1.00

1.50 (J)

1.80 (J)

1.60 (J)

1.50 (J)

1.60 (B)

Cement top:

7,350 ft

7,350 ft

No

Burst

Max anticipated surface

pressure: 4,615 psi Internal gradient: 0.220 psi/ft Calculated BHP 6,980 psi

No backup mud specified.

Tension:

API - tubing: 8 Round LTC: **Buttress:**

> Premium: Body yield:

Liner top:

Directional Info - Build & Drop Kick-off point 300 ft Departure at shoe: 662 ft Maximum dogleg: 0 °/100ft

0 ° Inclination at shoe:

Tension is based on air weight. Neutral point: 10,207 ft

| Run
Seq | Segment
Length
(ft) | Size
(in) | Nominal
Weight
(lbs/ft) | Grade | End
Finish | True Vert
Depth
(ft) | Measured
Depth
(ft) | Drift
Diameter
(in) | Est.
Cost
(\$) |
|------------|---------------------------|----------------------|-------------------------------|---------------|------------------------|----------------------------|---------------------------|---------------------------|----------------------|
| 1 | 3427 | 3.5 | 9.30 | L-80 | IJ Nu-Lock | 10750 | 10827 | 2.867 | 9047 |
| Run
Seq | Collapse
Load | Collapse
Strength | Collapse
Design | Burst
Load | Burst
Strength | Burst
Design | Tension
Load | Tension
Strength | Tension
Design |
| 1 | (psi)
6980 | (psi)
10530 | Factor 1.509 | (psi)
6980 | (psi)
10160 | Factor
1.46 | (kips)
31.9 | (kips)
207.2 | Factor 6.50 J |

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: May 3,2011 Salt Lake City, Utah

Remarks:

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 10750 ft, a mud weight of 12.5 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 921-25C MW2

API Number 43047515680000 APD No 3674 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 NWNW Sec 25 Tw 9.0S Rng 21.0E 787 FNL 907 FWL

GPS Coord (UTM) 627538 4429953 Surface Owner

Participants

See other comments

Regional/Local Setting & Topography

At the request of Kerr McGee, two additional wells to be used as monitoring wells are proposed to be drilled from the existing NBU 921-25D Pad. The additional wells are the NBU 921-25C MW1 and NBU 921-25C MW2. Both will be directionally drilled. On August 26, 2010 a pre-site evaluation was conducted on this pad for 5 additional wells to be drilled. At that time it was determined that the pad with the modifications included in this report should be suitable for drilling these additional wells. In reviewing the pre-site evaluation it is determined that the two additional wells can be added to this pad. The statements in this report reflect the findings of the August 26, 2010 evaluation. The five wells currently approved have surface casings set.

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 41.7 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25D pad will be created by enlarging the existing pad of the NBU 921-25D gas well. Five gas wells, to be directionally drilled, will be added. They are the NBU 921-25E3AS, 921-25E1CS, 921-25D1CS, 921-25D1BS and 921-25C1AS. The existing pad will be extended in all directions except to the west. The site is on the north slope of a ridge with a drainage to the east which will be filled. Significant excavation will be needed to extend the pad leaving an excess of 4,800 cubic yards of spoils to be stockpiled. A draw to the west beyond Corner 10 will be avoided. No drainage diversions are required. The White River is approximately 3 miles down drainage. The selected site as adjusted appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

Width Length

Ancillary Facilities

Waste Management Plan Adequate?

5/4/2011 Page 1

Environmental Parameters

Affected Floodplains and/or Wetlands

Flora / Fauna

Existing pad.

Soil Type and Characteristics

Erosion Issues

Sedimentation Issues

Site Stability Issues

Drainage Diverson Required?

Berm Required?

Erosion Sedimentation Control Required?

Paleo Survey Run? Paleo Potental Observed? Cultural Survey Run? Cultural Resources?

Reserve Pit

Site-Specific Factors Site Ranking

Distance to Groundwater (feet)
Distance to Surface Water (feet)
Dist. Nearest Municipal Well (ft)
Distance to Other Wells (feet)
Native Soil Type
Fluid Type
Drill Cuttings

Annual Precipitation (inches)

Affected Populations

Presence Nearby Utility Conduits

Final Score Sensitivity Level

Characteristics / Requirements

Pit has been constructed.

Closed Loop Mud Required? Liner Required? Liner Thickness Pit Underlayment Required?

Other Observations / Comments

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Roger Perry, Laura Gianokas, Lovel Young, Grizz Oleen, (Kerr McGee), Mitch.Batty, John Slaugh, (Timberline Engineering and Land Surveying), Ed Bonner (SITLA), Ben Williams (UDWR).

Floyd Bartlett 5/2/2011 **Evaluator Date / Time**

5/4/2011 Page 2

Application for Permit to Drill Statement of Basis

5/4/2011 Utah Division of Oil, Gas and Mining

Page 1

| APD No | API WellNo | Status | Well Type | Surf Owner | CBM |
|------------|------------------------|----------------|--------------------------|-------------------|------------|
| 3674 | 43047515680000 | SITLA | TW | S | No |
| Operator | KERR-MCGEE OIL & GAS O | NSHORE, L.P. | Surface Owner-APD | | |
| Well Name | NBU 921-25C MW2 | | Unit | NATURAL I | BUTTES |
| Field | NATURAL BUTTES | | Type of Work | DRILL | |
| Location | NWNW 25 9S 21E S | 787 FNL 907 FV | VL GPS Coord (UTM) | 627552E 44 | 429959N |
| 0 1 . 04 4 | (CD) | | | | |

Geologic Statement of Basis

Kerr McGee proposes to set 2,650' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 450'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of section 25. The well is listed as 2,640 feet deep and is used for oil well drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed surface casing and cement should adequately protect ground water in this area.

Brad Hill 5/3/2011
APD Evaluator Date / Time

Surface Statement of Basis

At the request of Kerr McGee, two additional wells to be used as monitoring wells are proposed to be drilled from the existing NBU 921-25D Pad. The additional wells are the NBU 921-25C MW1 and NBU 921-25C MW2. Both will be directionally drilled. On August 26, 2010 a pre-site evaluation was conducted on this pad for 5 additional wells to be drilled. At that time it was determined that the pad with the modifications included in this report should be suitable for drilling these additional wells. In reviewing the pre-site evaluation it is determined that the two additional wells can be added to this pad. The statements in this report reflect the findings of the August 26, 2010 evaluation. The five wells currently approved have surface casings set.

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Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site investigation. Mr. Bonner had no concerns pertaining to this location excepted as covered above. SITLA will provide site

Application for Permit to Drill Statement of Basis

Utah Division of Oil, Gas and Mining

Page 2

reclamation standards and a seed mix.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett 5/2/2011
Onsite Evaluator Date / Time

Conditions of Approval / Application for Permit to Drill

Category Condition

5/4/2011

Pits A synthetic liner with a minimum thickness of 30mils with a double felt subliner shall be properly installed and

maintained in the reserve pit.

Surface The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 4/28/2011 **API NO. ASSIGNED:** 43047515680000

WELL NAME: NBU 921-25C MW2

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6100

CONTACT: Andy Lytle

PROPOSED LOCATION: NWNW 25 090S 210E **Permit Tech Review:**

> **SURFACE: 0787 FNL 0907 FWL Engineering Review:**

> **BOTTOM:** 0282 FNL 1335 FWL Geology Review:

COUNTY: UINTAH

LATITUDE: 40.01209 **LONGITUDE:** -109.50552

UTM SURF EASTINGS: 627552.00 NORTHINGS: 4429959.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: UO 01189 ST PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 3 - State COALBED METHANE: NO

RECEIVED AND/OR REVIEWED: LOCATION AND SITING:

 PLAT R649-2-3.

Unit: NATURAL BUTTES **Bond:** STATE/FEE - 22013542

Potash R649-3-2. General

✓ Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Drilling Unit Oil Shale 190-13

Board Cause No: Cause 173-14 Water Permit: Permit #43-8496

Effective Date: 12/2/1999 **RDCC Review:**

Siting: Suspends General Siting **Fee Surface Agreement**

Intent to Commingle R649-3-11. Directional Drill

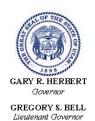
Commingling Approved

Comments: Presite Completed

Stipulations: 5 - Statement of Basis - bhill

15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald

API Well No: 43047515680000



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-25C MW2 API Well Number: 43047515680000 Lease Number: UO 01189 ST

Surface Owner: STATE Approval Date: 5/4/2011

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Surface casing shall be cemented to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

API Well No: 43047515680000

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

| | | | FORM O | | |
|--|---|--|--|--|--|
| | STATE OF UTAH | | FORM 9 | | |
| | DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINII | NG | 5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01189 ST | | |
| | RY NOTICES AND REPORTS O | _ | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: | | |
| | sals to drill new wells, significantly deepen ex
igged wells, or to drill horizontal laterals. Use | | 7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES | | |
| 1. TYPE OF WELL
Test Well | | | 8. WELL NAME and NUMBER:
NBU 921-25C MW2 | | |
| 2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONS | HORE, L.P. | | 9. API NUMBER: 43047515680000 | | |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S | PHONE treet, Suite 600, Denver, CO, 80217 3779 | NUMBER: 720 929-6515 Ext | 9. FIELD and POOL or WILDCAT:
NATURAL BUTTES | | |
| 4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0787 FNL 0907 FWL | | | COUNTY:
UINTAH | | |
| QTR/QTR, SECTION, TOWNSHI
Qtr/Qtr: NWNW Section: 25 | | STATE:
UTAH | | | |
| 11.
CHE | CK APPROPRIATE BOXES TO INDICATE | NATURE OF NOTICE, REPORT, | OR OTHER DATA | | |
| TYPE OF SUBMISSION | TYPE OF ACTION | | | | |
| | ACIDIZE | ALTER CASING | CASING REPAIR | | |
| ☐ NOTICE OF INTENT | CHANGE TO PREVIOUS PLANS | CHANGE TUBING | ☐ CHANGE WELL NAME | | |
| Approximate date work will start: | ☐ CHANGE WELL STATUS | COMMINGLE PRODUCING FORMATIONS | CONVERT WELL TYPE | | |
| ☐ SUBSEQUENT REPORT | DEEPEN | FRACTURE TREAT | □ NEW CONSTRUCTION | | |
| Date of Work Completion: | OPERATOR CHANGE | PLUG AND ABANDON | □ PLUG BACK | | |
| | PRODUCTION START OR RESUME | RECLAMATION OF WELL SITE | RECOMPLETE DIFFERENT FORMATION | | |
| SPUD REPORT Date of Spud: | | - | | | |
| | ☐ REPERFORATE CURRENT FORMATION ☐ | SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON | | |
| ✓ DRILLING REPORT | U TUBING REPAIR | VENT OR FLARE | ☐ WATER DISPOSAL | | |
| Report Date:
5/7/2011 | ☐ WATER SHUTOFF | SI TA STATUS EXTENSION | APD EXTENSION | | |
| 3/7/2011 | ☐ WILDCAT WELL DETERMINATION ☐ | OTHER | OTHER: | | |
| MIRU AIR RIG ON SURFACE CASING | MPLETED OPERATIONS. Clearly show all pertin
MAY 4, 2011. DRILLED SURFAC
AND CEMENTED. WELL IS WAIT
INT JOB WILL BE INCLUDED WIT
REPORT. | E HOLE TO 2700'. RAN
TING ON ROTARY RIG.
TH WELL COMPLETION A
U | | | |
| NAME (PLEASE PRINT)
Andy Lytle | PHONE NUMBER 720 929-6100 | TITLE
Regulatory Analyst | | | |
| SIGNATURE
N/A | | DATE 5/9/2011 | | | |

| | STATE OF UTAH | | FORM 9 | | |
|--|--|--|--|--|--|
| | DEPARTMENT OF NATURAL RESOURCE
DIVISION OF OIL, GAS, AND MIN | | 5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01189 ST | | |
| SUNDF | RY NOTICES AND REPORTS | ON WELLS | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: | | |
| | sals to drill new wells, significantly deepen
igged wells, or to drill horizontal laterals. U | | 7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES | | |
| 1. TYPE OF WELL
Test Well | | | 8. WELL NAME and NUMBER:
NBU 921-25C MW2 | | |
| 2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONS | HORE, L.P. | | 9. API NUMBER:
43047515680000 | | |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S | PHOI
treet, Suite 600, Denver, CO, 80217 3779 | NE NUMBER: 720 929-6515 Ext | 9. FIELD and POOL or WILDCAT:
NATURAL BUTTES | | |
| 4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0787 FNL 0907 FWL | | | COUNTY:
UINTAH | | |
| QTR/QTR, SECTION, TOWNSHI
Qtr/Qtr: NWNW Section: 25 | IP, RANGE, MERIDIAN:
5 Township: 09.0S Range: 21.0E Meridian: | S | STATE:
UTAH | | |
| 11. CHE | CK APPROPRIATE BOXES TO INDICAT | E NATURE OF NOTICE, REPORT, | OR OTHER DATA | | |
| TYPE OF SUBMISSION | | TYPE OF ACTION | | | |
| MIRU PETE MARTIN
RAN 14" 36.7# SCH | CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION MPLETED OPERATIONS. Clearly show all periods BUCKET RIG. DRILLED 20" COMBEDULE 10 PIPE. CMT W/28 SMCATION ON 05/04/2011 AT 15 | ONDUCTOR HOLE TO 40'.
K READY MIX. SPUD WELL
430 HRS. A
U Oil | CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER: Columes, etc. ACCEPTED by the Utah Division of I, Gas and Mining R RECORD ONLY | | |
| | | | | | |
| NAME (PLEASE PRINT)
Sheila Wopsock | PHONE NUMBER 435 781-7024 | TITLE
Regulatory Analyst | | | |
| SIGNATURE
N/A | | DATE 5/6/2011 | | | |

BLM - Vernal Field Office - Notification Form

| Subr | nitted By SHEILA WOPSOCK | Phone Nur | | |
|----------------------|--|---------------------------------------|-------------|----------------------|
| Qtr/0
Leas | Name/Number <u>NBU 921-250</u>
Qtr <u>NWNW</u> Section <u>25</u>
se Serial Number <u>UO 01189 S</u>
Number 4304751568 | Township g | <u>9S</u> R | Range 21E |
| Spuc | d Notice – Spud is the initia below a casing string. | l spudding o | of the we | ll, not drilling |
| | Date/Time <u>05/04/2011</u> | 1700 HRS | АМ | PM 🗸 |
| <u>Casiı</u>
time | <u>ng</u> – Please report time cas
s. | ing run star | ts, not ce | ementing |
| \checkmark | Surface Casing Intermediate Casing | | | RECEIVED |
| | Production Casing | | | MAY 0 4 2011 |
| | Liner
Other | | DIV | OF OIL, GAS & MINING |
| | Date/Time 05/10/2011 | 0800 HRS | AM 🗸 | РМ |
| BOPI | E
Initial BOPE test at surface
BOPE test at intermediate
30 day BOPE test
Other | . . | | |
| | Date/Time | | АМ 🗌 | РМ |
| Rem | arks ESTIMATED DATE AND KENNY GATHINGS AT 4 | TIME. PLEA
135.781.7048 | SE CONT | TACT |

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

| | , | | ENTITY ACTI | ON FORM | | | - Aphrolishing of Edishands Inc. | | |
|-----------|---------|---------------|----------------------|-------------------|----------|--|----------------------------------|--------------|--|
| Operator: | KERR | McGEE OIL & | GAS ONSHORE LP | Ореі | rator Ac | count Nu | ımber: <u>N</u> | 2995 | |
| \ddress: | 1368 S | OUTH 1200 E | AST | • | | | | | |
| | city VE | RNAL | | | | | | | |
| | state U | | _{zip} 84078 | u-quadratica that | P | hone Nu | mber: <u>(4</u> | 35) 781-7024 | |
| Well 1 | | | | | | egyetekterisekseksiksiksiksiksiksiksiksiksiksiksiksiksik | | | |
| API No | ımber | | Well Name | QQ | Sec | Twp | Rng | County | |
| 40047 | EAEGT | NIDLL 004 DEC | T BANAGA | I KRAZKRAJI | 25 | 00 | 245 | LIMITALI | |

| API Number | vveli Name | | QQ | Sec | IWP | Kng | County | |
|--|--------------------------|----------------------|------|----------|-----|-----|----------------------------------|--|
| 4304751567 | NBU 921-25C MW1 | | NWNW | 25 | 98 | 21E | UINTAH | |
| Action Code | Current Entity
Number | New Entity
Number | S | pud Dat | te | | ity Assignment
iffective Date | |
| $\overline{\mathcal{B}}$ | 99999 | 3900 | | 5/4/2011 | | . 5 | 110/11 | |
| Comments: MIRU PETE MARTIN BUCKET RIG. WSM VD SPUD WELL LOCATION ON 05/04/2011 AT 1700 HRS BHL = NEHW — | | | | | | | | |

| ۷ | ۷ | e | ı | ĺ | 2 |
|---|---|---|---|---|---|
| | | _ | | | |

| API Number | Well | QQ | Sec | Twp | Rng | County | | | |
|----------------|---|----|------|-----------|-----|--------|-------------------------------------|--|--|
| 4304751568 | NBU 921-25C MW2 | | NWNW | 25 | 98 | 21E | UINTAH | | |
| Action Code | Current Entity
Number | | | Spud Date | | | Entity Assignment
Effective Date | | |
| B | B 99999 2900 5/4/2011 5/10/11 | | | | | | 5/10/11 | | |
| Comments: MIRI | Comments: MIRU PETE MARTIN BUCKET RIG. W577VD | | | | | | | | |

SPUD WELL LOCATION ON 05/04/2011 AT 1430 HRS.

Well 3

| API Number | Welli | vame | <u> QQ</u> | Sec | Twp | Rng | County |
|-------------|--------------------------|----------------------|-------------|--------------|-------------------------------------|----------|-------------------------------|
| Action Code | Current Entity
Number | New Entity
Number | S | l
Spud Da | te | | ty Assignment
fective Date |
| omments: | | | | | Čenico de la composición | <u> </u> | |

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- Re-assign well from one existing entity to a new entity
- Other (Explain in 'comments' section)

SHEILA WOPSOCK

Name (Please Print)

🌽 Signature

REGULATORY ANALYST

5/6/2011

Date

(5/2000)

MAY 0 9 2011

RECEIVED

| | STATE OF UTAH | | FORM 9 |
|--|---|---|--|
| | DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ | NG | 5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01189 ST |
| SUNDF | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: | | |
| | sals to drill new wells, significantly deepen ex
ugged wells, or to drill horizontal laterals. Use | | 7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES |
| 1. TYPE OF WELL
Test Well | | | 8. WELL NAME and NUMBER:
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| 2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONS | HORE, L.P. | | 9. API NUMBER:
43047515680000 |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S | PHONE treet, Suite 600, Denver, CO, 80217 3779 | NUMBER: 720 929-6515 Ext | 9. FIELD and POOL or WILDCAT: NATURAL BUTTES |
| 4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0787 FNL 0907 FWL | | | COUNTY:
UINTAH |
| QTR/QTR, SECTION, TOWNSHI
Qtr/Qtr: NWNW Section: 2! | IP, RANGE, MERIDIAN:
5 Township: 09.0S Range: 21.0E Meridian: S | | STATE:
UTAH |
| 11. CHE | CK APPROPRIATE BOXES TO INDICATE | NATURE OF NOTICE, REPORT, | OR OTHER DATA |
| TYPE OF SUBMISSION | | TYPE OF ACTION | |
| The Operator request the Operator request. | □ ACIDIZE ✓ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION OMPLETED OPERATIONS. Clearly show all pertinests approval for changes in the clests approval for a FIT waiver all nge. Please see attachments. The | drilling plan. Specifically, nd a production casing nank you. | |
| | | | |
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER 720 929-6304 | TITLE
Regulartory Analyst | |
| SIGNATURE
N/A | | DATE
10/20/2011 | |

NBU 921-25C MW2 Drilling Program
1 of 7

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-25C MW2

Surface: 787 FNL / 907 FWL NWNW BHL: 282 FNL / 1335 FWL NENW

Section 25 T9S R21E

Unitah County, Utah Mineral Lease: UO 01189 ST

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

| <u>Formation</u> | <u>Depth</u> | <u>Resource</u> |
|------------------|--------------|-----------------|
| Uinta | 0 - Surface | |
| Green River | 1557 | |
| Birds Nest | 1829 | Water |
| Mahogany | 2198 | Water |
| Wasatch | 4800 | Gas |
| Mesaverde | 7515 | Gas |
| MVU2 | 8469 | Gas |
| MVL1 | 9033 | Gas |
| Sego | 9747 | Gas |
| Castlegate | 9794 | Gas |
| MN5 | 10213 | Gas |
| TVD | 10750 | Gas |
| TD | 10827 | Gas |

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

NBU 921-25C MW2 Drilling Program 2 of 7

6. Evaluation Program:

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 10750' TVD, approximately equals 6,865 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,500 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 921-25C MW2 Drilling Program

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 921-25C MW2 Drilling Program
4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

NBU 921-25C MW2

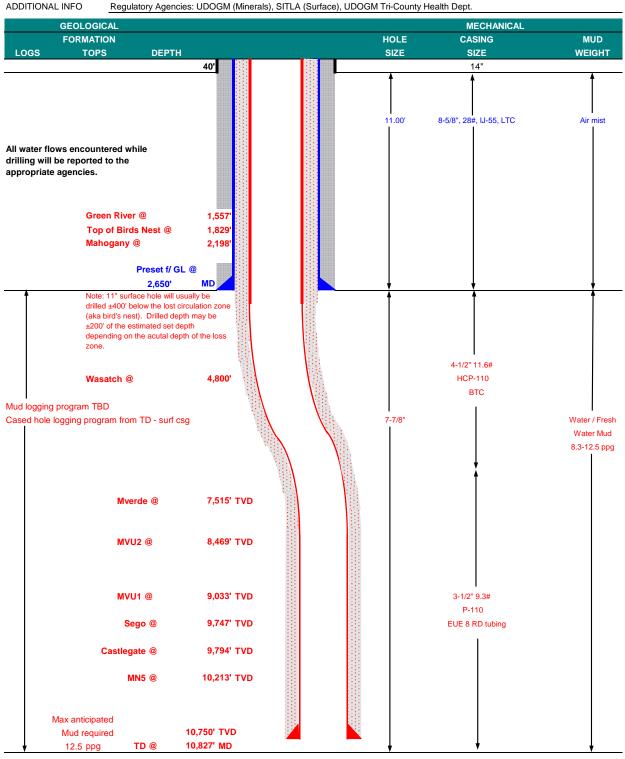
Drilling Program

5 of 7



KERR-McGEE OIL & GAS ONSHORE LP <u>DRILLING PROGRAM</u>

| COMPANY NAME KER | RR-McGEE O | IL & GAS ONS | HORE LP | | DATE | October 2 | 0, 2011 | | |
|---------------------|------------|----------------|----------------|------------|------------|--------------|-----------------|------------|--|
| WELL NAME NE | U 921-250 | MW2 | | | TD | 10,750' | TVD | 10,827' MD | |
| FIELD Natural Butte | es | COUNTY | Uintah S | STATE Uta | h | FINIS | SHED ELEVATION | 4,941' | |
| SURFACE LOCATION | NWNW | 787 FNL | 907 FWL | Sec 25 | T 9S | R 21E | | | |
| | Latitude: | 40.012122 | Longitude | e: -109.50 | 5584 | | NAD 27 | _ | |
| BTM HOLE LOCATION | NENW | 282 FNL | 1335 FWL | Sec 25 | T 9S | R 21E | | _ | |
| | Latitude: | 40.013511 | Longitude | e: -109.50 | 406 | | NAD 27 | _ | |
| OBJECTIVE ZONE(S) | Wasatch/M | lesaverde | | | | | | | |
| ADDITIONAL INFO | Regulatory | Agencies: LIDO | OGM (Minerals) | SITLA (Su | rface) III | OOGM Tri-Cou | nty Health Dent | • | |



NBU 921-25C MW2 Drilling Program

6 of 7



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

| CASING PROGRAM | | | | | | | DESIGN FACTORS | | | | |
|----------------|--------|-------|------|--------|-------|---------|----------------|--------|----------|----------|---------|
| | | | | | | | | | | LTC/8 RD | втс |
| | SIZE | INTE | RVA | - | WT. | GR. | CPLG. | BURST | COLLAPSE | TE | INSION |
| CONDUCTOR | 14" | 0- | -40' | | | | | | | | |
| | | | | | | | | 3,390 | 1,880 | 348,000 | N/A |
| SURFACE | 8-5/8" | 0 | to | 2,650 | 28.00 | IJ-55 | LTC | 2.04 | 1.52 | 5.36 | N/A |
| | | | | | | | | 10,690 | 8,650 | N/A | 367,000 |
| PRODUCTION | 4-1/2" | 0 | to | 7,350 | 11.60 | HCP-110 | BTC | 1.53 | 1.24 | N/A | 5.32 |
| | | | | | | | | 13,970 | 12,620 | 284,920 | N/A |
| PRODUCTION | 3-1/2" | 7,350 | to | 10,827 | 9.30 | P-110 | EUE 8 RD | 2.00 | 1.81 | 10.89 | N/A |
| | | | | | | | | | | | |

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

| | FT. OF FILL | DESCRIPTION | SACKS | EXCESS | WEIGHT | YIELD |
|----------------------|-------------|--|---------------|----------------|-------------|-------|
| SURFACE LEAD | 500' | Premium cmt + 2% CaCl | 180 | 60% | 15.80 | 1.15 |
| Option 1 | | + 0.25 pps flocele | | | • | |
| TOP OUT CMT (6 jobs) | 1,200' | 20 gals sodium silicate + Premium cmt | 270 | 0% | 15.80 | 1.15 |
| | | + 2% CaCl + 0.25 pps flocele | | | | |
| SURFACE | | NOTE: If well will circulate water | to surface, o | ption 2 will I | be utilized | |
| Option 2 LEAD | 2,150' | 65/35 Poz + 6% Gel + 10 pps gilsonite | 200 | 35% | 11.00 | 3.82 |
| | | + 0.25 pps Flocele + 3% salt BWOW | | | | |
| TAIL | 500' | Premium cmt + 2% CaCl | 150 | 35% | 15.80 | 1.15 |
| | | + 0.25 pps flocele | | | | |
| TOP OUT CMT | as required | Premium cmt + 2% CaCl | as req. | | 15.80 | 1.15 |
| PRODUCTION LEAD | 4,297' | Premium Lite II +0.25 pps | 320 | 20% | 11.00 | 3.38 |
| | | celloflake + 5 pps gilsonite + 10% gel | | | | |
| | | + 0.5% extender | | | | |
| TAIL | 6,530' | 50/50 Poz/G + 10% salt + 2% gel | 1,920 | 30% | 14.30 | 1.31 |
| | | + 0.1% R-3 | | | | |

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

| SURFACE | Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe | | | | | |
|------------|--|--|--|--|--|--|
| PRODUCTION | Float shoe, 1 jt, float collar. No centralizers will be used. | | | | | |
| | | | | | | |

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

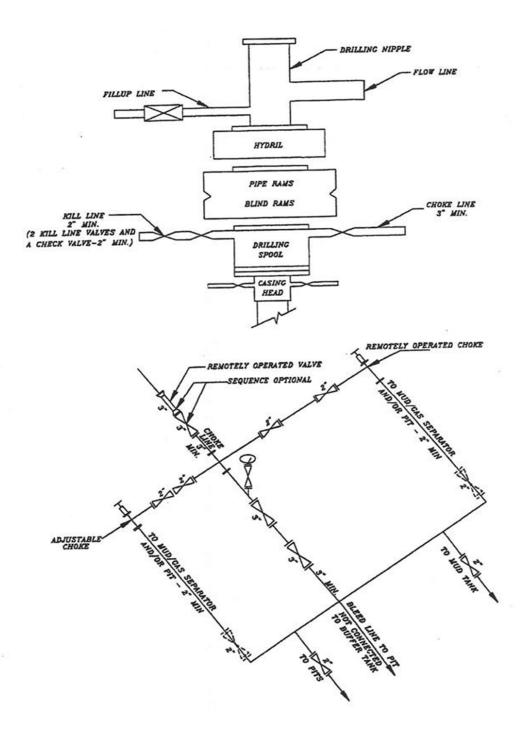
| DRILLING ENGINEER: | | DATE: | |
|--------------------------|------------------------------|-------|--|
| | Nick Spence / Emile Goodwin | | |
| DRILLING SUPERINTENDENT: | | DATE: | |
| | Kenny Gathings / Lovel Young | | |

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-25C MW2

Drilling Program
7 of 7

EXHIBIT A NBU 921-25C MW2



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

| | STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE | | FORM 9 |
|--|--|--|---|
| | 5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01189 ST | | |
| SUNDF | RY NOTICES AND REPORTS | ON WELLS | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: |
| | sals to drill new wells, significantly deepen
igged wells, or to drill horizontal laterals. U | | 7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES |
| 1. TYPE OF WELL
Test Well | | | 8. WELL NAME and NUMBER:
NBU 921-25C MW2 |
| 2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONS | HORE, L.P. | | 9. API NUMBER:
43047515680000 |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S | PHON
treet, Suite 600, Denver, CO, 80217 3779 | NE NUMBER: 720 929-6515 Ext | 9. FIELD and POOL or WILDCAT:
NATURAL BUTTES |
| 4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0787 FNL 0907 FWL | | | COUNTY:
UINTAH |
| QTR/QTR, SECTION, TOWNSHI | IP, RANGE, MERIDIAN:
5 Township: 09.0S Range: 21.0E Meridian: | S | STATE:
UTAH |
| 11. CHE | CK APPROPRIATE BOXES TO INDICAT | E NATURE OF NOTICE, REPORT, | OR OTHER DATA |
| TYPE OF SUBMISSION | | TYPE OF ACTION | |
| MIRU ROTARY RIG. F
2011. RAN PRODU
PIONEER RIG 54 ON
WILL BE INCLUDED W
ON FINAL COMPLET | CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION SMPLETED OPERATIONS. Clearly show all performation CASING AND CEMENT OF COUNTY OF COUNT | 00' TO 10,970' ON DEC. 1,
ED CASING. RELEASED
DETAILS OF CEMENT JOB
REPORT. WELL IS WAITIN
THIS LOCATION WILL BE | |
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER | TITLE Regulartory Analyst | |
| SIGNATURE | 720 929-6304 | DATE | |
| N/A | | 12/8/2011 | |

| | STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE | | FORM 9 |
|--|--|--|---|
| | 5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01189 ST | | |
| SUNDF | RY NOTICES AND REPORTS | ON WELLS | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: |
| | sals to drill new wells, significantly deepen
igged wells, or to drill horizontal laterals. U | | 7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES |
| 1. TYPE OF WELL
Test Well | | | 8. WELL NAME and NUMBER:
NBU 921-25C MW2 |
| 2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONS | HORE, L.P. | | 9. API NUMBER:
43047515680000 |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S | PHON
treet, Suite 600, Denver, CO, 80217 3779 | NE NUMBER: 720 929-6515 Ext | 9. FIELD and POOL or WILDCAT:
NATURAL BUTTES |
| 4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0787 FNL 0907 FWL | | | COUNTY:
UINTAH |
| QTR/QTR, SECTION, TOWNSHI | IP, RANGE, MERIDIAN:
5 Township: 09.0S Range: 21.0E Meridian: | S | STATE:
UTAH |
| 11. CHE | CK APPROPRIATE BOXES TO INDICAT | E NATURE OF NOTICE, REPORT, | OR OTHER DATA |
| TYPE OF SUBMISSION | | TYPE OF ACTION | |
| MIRU ROTARY RIG. F
2011. RAN PRODU
PIONEER RIG 54 ON
WILL BE INCLUDED W
ON FINAL COMPLET | CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION SMPLETED OPERATIONS. Clearly show all performation CASING AND CEMENT OF COUNTY OF COUNT | 00' TO 10,970' ON DEC. 1,
ED CASING. RELEASED
DETAILS OF CEMENT JOB
REPORT. WELL IS WAITIN
THIS LOCATION WILL BE | |
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER | TITLE Regulartory Analyst | |
| SIGNATURE | 720 929-6304 | DATE | |
| N/A | | 12/8/2011 | |

State of Utah - Notification Form

| Operator Anadarko Petroleum Rig Name/# PIONEER 54 |
|---|
| Submitted By STUART NEILSON Phone Number 435-790-2921 |
| Well Name/Number NBU 921-25C MW2 |
| Qtr/Qtr NW4, NW/4 Section 25 Township 9S Range 21E |
| Lease Serial Number <u>UO 01189 ST</u> |
| API Number 4304751568 |

| <u>Casi</u> | ng – Time casing run starts, not cementing | times. |
|-------------|--|---------------------------|
| | Production Casing
Other | |
| | Date/Time <u>12/03/11</u> <u>4</u> AM ⊠ PM [| |
| BOP | <u>E</u> Initial BOPE test at surface casing point Other | |
| | Date/Time AM _ PM _ | RECEIVED DEC 0 6 2011 |
| | Move
ation To: | DIV. OF OIL, GAS & MINING |
| | Date/Time AM _ PM _ | |
| Rem | narks | |

| | | | PARTM | STATE O
ENT OF NA
OF OIL, (| TURAL | RESO | | | | | (hig
5. L | ghlight cha | NATION AND S | | RM 8
ER: |
|--|--------------------------------|----------------------|--------------|-----------------------------------|------------------------|------------------|----------------|------------|-----------------|-------------------------------|--|-----------------------------------|-------------------------------|---|---------------------------------------|
| WEL | L COMP | LETIC | ON OF | RECO | MPLE | ETIC | N R | =POF | Τ ΔΝΓ |) LOG | | | OTTEE OR TR | BE NAME | |
| 1a. TYPE OF WELL | | OIL
WELI | | GAS WELL | 1 | ORY [| | | | TOR WELL | | NIT or CA AG | REEMENT NAM | ИE | |
| b. TYPE OF WORI
NEW
WELL | K:
HORIZ.
LATS. | DEEF
EN | °- 🔲 | RE-
ENTRY |] [| DIFF.
RESVR.[| | ОТН | ER | • | 8. V | VELL NAME a | nd NUMBER:
1-25C MW | /2 | |
| 2. NAME OF OPER.
KERR MC | | & GAS | ONSH | ORE, L.P | • | | | | | | | PI NUMBER: | 568 | | |
| 3. ADDRESS OF OR P.O.BOX 17 | | CITY | DENV | ER | STATE | СО | ZIP 802 | 217 | | NUMBER:
0) 929-6304 | 10 FIELD AND POOL, OR WILDCAT NATURAL BUTTES | | | | |
| LOCATION OF WAT SURFACE; AT TOP PRODU | NWNW 7 | 87 FNL | | WL S25,T | 9S,R2 | 1E | | | | | | QTR/QTR, SE
MERIDIAN:
WNW 2 | ECTION, TOWN | SHIP, RANGE | ·. |
| AT TOTAL DEPT | | | | | • | | E Poj | 1 <u> </u> | > (-) | Sm | 1 . | COUNTY
JINTAH | | | JTAH |
| 14. DATE SPUDDE
5/4/2011 | | DATE T.D.
12/1/20 | REACHED: | | COMPLE
/2011 | TED: | A | ABANDON | | READY TO PRODU | CE 🔲 | | TIONS (DF, RKE
1 GL | 3, RT, GL): | |
| 18. TOTAL DEPTH: | ^{MD} 10,9
TVD 10,8 | | 19. P | LUG BACK T.D. | • | 0,868
0,788 | | 20. TF I | MULTIPLE CO | OMPLETIONS, HOW | MANY? * | 21. DEPTH
PLUG | | | |
| HDIL/ZDL/C | | | | | EMPE | RATU | JRE | | WAS WELF | | NO
NO
NO | YES | (Sub | mit analysis)
mit report)
mit copy) | |
| HOLE SIZE | SIZE/GRAD | <u> </u> | EIGHT (#/ft. | <u> </u> | MD) | вотто | M (MD) | | EMENTER
EPTH | CEMENT TYPE &
NO. OF SACKS | SLUI
VOLUM | | EMENT TOP ** | AMOUNT | PULLED |
| 20" | 14" 5 | STL | 36.7# | 0 | | 4 | 0 | | | 28 | | | ····· | | |
| 11" | 8 5/8" IJ | -55 | 28# | 0 | | 2,6 | 80 | | | 505 | | | | | |
| 7 7/8" | 4 1/2" | I-80 | 11.6# | 0 | | 7,7 | 701 | | | 2,459 | | | | | |
| 7 7/8" | 3 1/2" L | 80 | 9.2# | 7,70 | 01 | 10,8 | 368 | | | | | | | | |
| 25. TUBING RECOI | RD. | | | | | | | | | | | | | | |
| SIZE | DEPTH SE | T (MD) | PACKER S | ET (MD) | SIZE | | DEPTH | SET (MD | PACKE | R SET (MD) | SIZE | DEP | TH SET (MD) | PACKER S | ET (MD) |
| 26. PRODUCING IN | TERVALS | | | | | | | ****** | 27 PERFOI | RATION RECORD | | | | <u> </u> | |
| FORMATION | NAME | TOP (MI | D) BC | TTOM (MD) | TOP (T | VD) | вотто | M (TVD) | | L (Top/Bot - MD) | SIZE | NO. HOLES | PERFO | RATION STAT | US |
| (A) MESAVE | RDE | | | | | | | | 7,651 | 9,612 | 0.20 | 12 | Open 🗸 | Squeezed | |
| (B) BLACKH | AWK | | | | | | | | 10,446 | 10,567 | 0.20 | 84 | Open 🗸 | Squeezed | <u> </u> |
| (a) WSM | ND | | | | | | | | | | | | Open | Squeezed | <u> </u> |
| (D) | | | | | | | | | | | | | Орер | -Şqueezed, | |
| 28. ACID, FRACTU | RE, TREATMEN | T, CEMENT | SQUEEZE | , ETC. | | | | | | | | | I H Land | JLIV. | |
| DEPTH | INTERVAL | | | | | | | AM | OUNT AND T | YPE OF MATERIAL | | | MAL | 24 2 | 112 |
| | | | | | | | | | | | | | DIV. OF OI | l, cas a | MINING |
| 29. ENCLOSED AT | TACHMENTS: | <u> </u> | | | | | | | | | | | 30. WE | L STATUS: | · · · · · · · · · · · · · · · · · · · |

GEOLOGIC REPORT

CORE ANALYSIS

DST REPORT DIRECTIONAL SURVEY

OTHER:

ELECTRICAL/MECHANICAL LOGS

SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION

| | PRODUCTION |
|--|------------|
| | |
| | |

INTERVAL A (As shown in item #26)

| DATE FIRST PR | RODUCED: | TEST DA | TE: | | HOURS TESTED |); | TEST PRODUCTION RATES: → | OIL BBL: | GAS MCF: | WATER - | R – BBL: | PROD. METHOD: |
|------------------------------------|--|-----------------------------------|---|--------------------------|---------------------------------------|-----------------------|-----------------------------|--|----------------|--------------|----------|----------------------------------|
| CHOKE SIZE: | TBG. PRESS. | CSG. PR | ESS. API GR | AVITY | BTU - GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | N OIL - BBL: | GAS - MCF: | WATER - | - BBL: | INTERVAL STATUS: |
| | | | | | INT | ERVAL B (As sho | wn in item #26) | | | | | |
| DATE FIRST PF | RODUCED: | TEST DA | TE: | | HOURS TESTED |): | TEST PRODUCTION RATES: → | OIL – BBL: | GAS - MCF: | WATER - BBL: | - BBL: | PROD. METHOD: |
| CHOKE SIZE: | TBG. PRESS. | CSG. PRI | ESS. API GR | AVITY | BTU – GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | N OIL-BBL: | GAS - MCF: | WATER - | - BBL: | INTERVAL STATUS: |
| | | | | | INT | ERVAL C (As sho | wn in item #26) | | | | | |
| DATE FIRST PF | RODUCED: | TEST DA | TE: | | HOURS TESTED | D : | TEST PRODUCTION RATES: → | OIL-BBL: | GAS - MCF: | WATER - | - BBL: | PROD. METHOD: |
| CHOKE SIZE: | TBG. PRESS. | CSG. PRI | ESS. API GR | AVITY | BTU – GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | N OIL - BBL: | GAS - MCF: | WATER - | - BBL: | INTERVAL STATUS: |
| | | | | | INT | ERVAL D (As sho | wn in item #26) | | | | | |
| DATE FIRST PF | RODUCED: | TEST DA | TE: | | HOURS TESTED |); | TEST PRODUCTION
RATES: → | OIL - BBL: | GAS MCF: | WATER - | - BBL: | PROD. METHOD: |
| CHOKE SIZE: | TBG. PRESS. | CSG. PR | ESS. API GR | AVITY | BTU - GAS | GAS/OIL RATIO | 24 HR PRODUCTION RATES: → | N OIL - BBL: | GAS - MCF: | WATER - | - BBL: | INTERVAL STATUS: |
| 32. DISPOSITIO | ON OF GAS (So | ld, Used for F | uel, Vented, Etc | :.) | | | | | . 1 | | - | |
| 33. SUMMARY | OF POROUS Z | ONES (Include | e Aquifers): | | | | 1 | 34. FORMATION | (Log) MARKERS: | *** | | |
| Show all imports tested, cushion a | ant zones of porc
used, time tool o | osity and conte
pen, flowing a | ents thereof: Core
nd shut-in pressi | ed interva
ures and i | als and all drill-stem
recoveries. | n tests, including de | epth interval | | | | | |
| Formati | on | Top
(MD) | Bottom
(MD) | | Descript | tions, Contents, etc | | | Name | | , | Top
Measured Depth) |
| | | | | | | | | GREEN R
BIRD'S NE
WASATCI
MESAVER | EST
H | | | 1,570
1,801
4,889
7,740 |

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 225' of the surface hole was drilled with a 12 ¼" bit. The remainder of surface hole was drilled with an 11" bit. Attached is the chronological history, perf report & final survey. The well has 16 flowmeter monitoring stations; 1-2 are in Blackhawk & 3-16 are in Mesaverde.

| oo. The cosy octany that the foregoing and adactica information is complete and correct as determined fro | iii aii avaii | able records, |
|---|---------------|--------------------|
| NAME (PLEASE PRINT) JAIME SCHARNOWSKE | TITLE | REGULATORY ANALYST |
| SIGNATURE Jaima & hamaushe | DATE | 1/19/2012 |

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests
- * ITEM 20: Show the number of completions if production is measured separately from two or more formations.
- **ITEM 24: Cement Top Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

Operation Summary Report

 Well: NBU 921-25C MW2
 Spud Conductor: 5/4/2011
 Spud Date: 5/5/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25D PAD
 Rig Name No: PIONEER 54/54, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 4/27/2011
 End Date: 12/5/2211

Active Datum: RKB @4,960.00usft (above Mean Sea

UWI: NW/NW/0/9/S/21/E/25/0/0/26/PM/N/787/W/0/907/0/0

| Level) | | | | | | | | | |
|------------|------------------|--------------------|------------------|--------|------|-------------|----------|----------------|---|
| Date | 4 19 75 10 10 10 | Time
art-End | Duration
(hr) | Phase | Code | Sub
Code | P/U | MD From (usft) | Operation |
| 5/4/2011 | 18:30 | - 0:00 | 5.50 | DRLSUR | 01 | E | Р | | RIG DOWN AND PREPARE TO INSPECT DRILL PIPE |
| 5/5/2011 | 0:00 | - 7:00 | 7.00 | DRLSUR | 21 | C | P | | WAIT ON DAYLIGHT TO MOVE RIG TO NBU 921-35D PAD |
| | 7:00 | - 16:30 | 9.50 | DRLSUR | 01 | Α | Р | | MOVE RIG TO NBU 921-35D PAD NBU 921-25C MW2
WELL INSPECT DRILL PIPE |
| | 16:30 | - 19:00 | 2.50 | DRLSUR | 14 | Α | P | | WELD ON CONDUCTOR AND RIG UP FLOW LINE |
| | 19:00 | - 20:00 | 1.00 | DRLSUR | 06 | Α | Р | | PICK UP BIT AND MUD MOTOR PRE PARE TO SPUD |
| | | - 21:30 | 1.50 | DRLSUR | 02 | C | P | | SPUD WELL DRILL 12.25" HOLE F/40' - 225' AVE
ROP 150 FT HR WOB 8-20 ROT 45-55 DHR 96 GPM
600 |
| | 21:30 | - 0:00 | 2.50 | DRLSUR | 06 | Α | P | | TOOH PICK UP DIRECTIONAL TOOLS AND ORIENT MWD TOOL TO MUD MOTOR AND TIH |
| 5/6/2011 | 0:00 | - 14:00
- 15:00 | 14.00 | DRLPRO | 02 | C | Р | | DRILL 11" HOLE F/ 225' - 2035' AVE ROP 129 FT HR
GPM 600 DHR 96 ROT 45-55 WOB 20-22 |
| | | - 22:00 | 1.00 | DRLPRO | 07 | A | P | | DAILY RIG SERVICE |
| | | - 22.00 | 7.00 | DRLPRO | 02 | С | P | | DRILL 11" HOLE F/ 2035' - 2700 T.D. AVE ROP 129
FT HR GPM 600 DHR 96 ROT 45-55 WOB 20-22
LAST SURVEY 13.9 DEG 41.13 AZI |
| | 22:00 | - 23:00 | 1.00 | DRLPRO | 05 | С | Р | | CIRCULATE AND CONDITION MUD PRIOR TO LDDS |
| | 23:00 | - 0:00 | 1.00 | DRLPRO | 06 | Α | P | | BEGIN TOOH LAYING DOWN DRILL STRING |
| 5/7/2011 | 0:00 | - 3:30 | 3.50 | DRLSUR | 06 | Α | Р | | TOOH LAYING DOWN BREAK BIT AND MUD MOTOR
L/D MWD TOOLS |
| | 3:30 | - 6:30 | 3.00 | DRLSUR | 12 | Α | P | | RIG UP AND RUN 61 JTS 8.625 28# J-55 CASING
SHOE AT 2669' BAFFLE AT 2625' |
| | 6:30 | - 8:30 | 2.00 | DRLSUR | 12 | С | P | | HOLD SAFETY MEETING W/ SUPERIOR WELL SERVICES CEMENTERS. INSTALL CEMENT HEAD ON TOP OF LANDING JT. PRESSURE TEST LINE TO 2000 PSI. PUMP 50 BBLS OF WATER AHEAD, PUMP 20 BBLS OF GEL WATER. PUMP 200 SX OF 11#, 3.52 YD, 23 GAL/SK HI FILL LEAD, PUMP 225 SX OF 15.8# 1.15 YD, 5 GAL/SK TAIL PREM. CLASS G CEMENT. DROP PLUG ON FLY, DISPLACE W/ 156 BBLS OF WATER. 490 PSI OF LIFT @ 2 BBLS/MIN RATE. 30 BBLS OF LEAD TO SURFACE. BUMP PLUG W/ 900 PSI. FLOAT HELD. |
| | 8:30 | - 9:00 | 0.50 | DRLSUR | 14 | À | P | | CUT CONDUCTOR AND RIG DOWN FLOW LINE |
| | 9:00 | - 9:30 | 0.50 | DRLSUR | 12 | Ē | P | | RUN 100' OF 1" PIPE PUMP 80 SX OF 15.8# PREMIUM
3% CALC CEMENT DOWN 1" DOWN BACK SIDE.
CEMENT TO SURFACE |
| 11/23/2011 | 13:30 | - 14:30 | 1.00 | DRLPRO | 01 | Ċ, | P | | SKID RIG TO THE NBU 921-25C MW2, LEVEL & CENTER RIG |
| | | - 19:30 | 5,00 | DRLPRO | 14 | Α | P | | NIPPLE UP BOP AND STRATA, R/U WELLHEAD
SPOOL AND SAGE RIDER MONITOR LINES ON
PREVIOUS WELL |
| | | - 0:00 | 4.50 | DRLPRO | 15 | Α | P | | HPJSM W/RIG & TESTER, TEST RAMS & ALL
VALVES 250 LOW 5000 HIGH, ANN 2500 |
| 11/24/2011 | 0:00 | - 2:00 | 2.00 | DRLPRO | 14 | Α | Р | | HPJSM W/ RIG & TESTER, TEST RAMS & ALL
VALVES 250 LOW 5000 HIGH, ANN 2500 |
| | 2:00 | - 5:30 | 3.50 | DRLPRO | 14 | В | Z | <u> </u> | STRATA ORBIT VALVE FAILED TO TEST,
INSTALLED NEW ONE |

Operation Summary Report

 Well: NBU 921-25C MW2
 Spud Conductor: 5/4/2011
 Spud Date: 5/5/2011

 Project: UTAH-UINTAH
 Site: NBU 921-25D PAD
 Rig Name No: PIONEER 54/54, CAPSTAR 310/310

 Event: DRILLING
 Start Date: 4/27/2011
 End Date: 12/5/2211

Active Datum: RKB @4,960.00usft (above Mean Sea

UWI: NW/NW/0/9/S/21/E/25/0/0/26/PM/N/787/W/0/907/0/0

| Date | 0.40.707.5 | | 12.52 | Dkees | 0.44 | 102000 | - Span T | |
|----------|------------|-----------------|------------------|--------|------|-------------|----------|--|
| Date | | Time
art-End | Duration
(hr) | Phase | Code | Sub
Code | P/U | MD From Operation |
| <u> </u> | 5:30 | - 7:00 | 1.50 | DRLPRO | 15 | A | Z | (usft) TESTING STRATA EQUIPMENT |
| | 7:00 | - 7:30 | 0.50 | DRLPRO | 14 | В | P | |
| | | - 9:30 | | | | | | INSTALL WEAR BUSHING, PRE-SPUD INSPECTION |
| | | | 2.00 | DRLPRO | 06 | Α | P | P/U BIT #1, MM DIR TOOLS & SCRIBE, TIH TO TOP
OF CEMENT @ 2440' |
| | 9:30 | - 10:00 | 0.50 | DRLPRO | 09 | Α | Р | SLIP AND CUT 90' DRILL LINE |
| | 10:00 | - 12:00 | 2.00 | DRLPRO | 02 | F | | DRLG CEMENT, F/E & OPEN HOLE TO 2700 |
| | | , | | | | | | FLOAT @ 2632, SHOE @ 2677 |
| | 12:00 | - 12:30 | 0.50 | DRLPRO | 02 | D | P | DRLG F/ 2700 TO 2761', 61' @ 122' PH WOB / 16-18, RPM 60 SPM 180 - GPM 527 MW 8.7, VIS 30, CIRC RESERVE PIT TRQ ON/OFF = 3-5 K PSI ON /OFF = 1500-1300 , DIFF 250-500 PU/SO/RT = 90-85-80 SLIDE = ROT = 100% |
| | | | | | | | | STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| | 12:30 | - 13:30 | 1.00 | DRLPRO | 22 | L | Z | STRATA ROTATING RUBBER LEAKING, C/O |
| | 13:30 | - 16:30 | 3.00 | DRLPRO | 02 | D | Р | DRLG F/ 2761' TO 3140', 379' @ 126' PH
WOB / 16-18, RPM 60
SPM 180 - GPM 527
MW 8.7, VIS 30, CIRC RESERVE PIT
TRQ ON/OFF = 3-5 K |
| | | | | | | | | PSI ON /OFF = 1500-1300 , DIFF 250-500
PU/SO/RT = 90-85-80
SLIDE = 61' IN 0.92 HRS @ 66' PH
ROT = 318' IN 2.08 HRS @ 153' PH
STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| | 16:30 | - 17:00 | 0.50 | DBLDDA | 07 | | Ď | 6' L & 2.4' BELOW PLAN LINE |
| | | | 0.50 | DRLPRO | 07 | Α | Р | SERVICE RIG, F/T ANN & HCR VALVE, BOP DRLL 7
SEC |
| | 17:00 | - 0:00 | 7.00 | DRLPRO | 02 | D | Р | DRLG F/ 3140' TO 3905', 765' @ 109' PH
WOB / 18-19, RPM 60
SPM 180 - GPM 527
MW 8.7, VIS 30, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 3-5 K PSI ON /OFF = 1500-1300 , DIFF 250-500 PU/SO/RT = 90-85-80 |
| | | | | | | | | SLIDE = 127' IN 2.75 HRS @ 46' PH
ROT = 638' IN 2.54 HRS @ 251' PH |
| | | | | | | | | STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| | | | | | | | | 22.5' N & 14' W OF TARGET CENTER |

| | | | | | Opera | ation S | Summa | ry Report |
|-----------------|---|-----------------|---------------|------------|----------|-----------------|-------------------|--|
| Well: NBU 921-2 | 5C MW2 | | | Spud Cor | nductor: | 5/4/2011 | -012 202 - 1003 R | Spud Date: 5/5/2011 |
| Project: UTAH-L | INTAH | | | Site: NBL | 921-25 | D PAD | | Rig Name No: PIONEER 54/54, CAPSTAR 310/310 |
| Event: DRILLING | 3 | | | Start Date | | | | |
| Active Datum: R | | 60 00ueft (s | have Mean S | | | | 9/S/21/E/2 | End Date: 12/5/2211
5/0/0/26/PM/N/787/W/0/907/0/0 |
| Level) | 110 (64,0 | oo.oousit (e | DOVE MEAN 3 | ca | 0 1 11 | V 4/ 14 V 4/ O/ | 9/0/2 1/12/2 | 010101201F (All 141 / 61) AA(0) A0 (10) O |
| Date | 100000000000000000000000000000000000000 | Time
art-End | Duration (hr) | Phase | Code | Sub | P/U | MD From Operation |
| 11/25/2011 | | - 17:30 | 17.50 | DRLPRO | 02 | Code
 D | P | (usff) DRLG F/ 3905' TO 5985', 2080' @ 119' PH |
| | | | | | | | | WOB / 19-20, RPM 60 |
| | | | | | | | | SPM 180 - GPM 527 |
| | | | | | | | | MW 9.3, VIS 37, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 5-7 K |
| | | | | | | | | PSI ON /OFF = 1700-1900 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 150/125/139 |
| | | | | | | | | SLIDE = 135' IN 3.25 HRS @ 41' PH |
| | | | | | | | | ROT = 1945' IN 14.25 HRS @ 136' PH |
| | | | | | | | | STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| | 17:30 | - 18:00 | 0.50 | DRLPRO | 07 | Α | P | 4.65' N & 8.44' W OF TARGET CENTER |
| | | - 0:00 | 6.00 | DRLPRO | 02 | D | Р | SERVICE RIG, F/T ANN & HCR VALVE |
| | | 0.00 | 0.00 | DICETIO | 02 | U | Г | DRLG F/ 5985' TO 6587', 602' @ 100' PH |
| | | | | | | | | WOB / 19-20, RPM 60
SPM 180 - GPM 527 |
| | | | | | | | | |
| | | | | | | | | MW 9.4, VIS 37, CIRC RESERVE PIT TRQ ON/OFF = 5-7 K |
| | | | | | | | | PSI ON /OFF = 1700-1900 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 150/125/139 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| | | | | | | | | 10' N & 8.6' W OF TARGET CENTER |
| 11/26/2011 | 0:00 | - 15:00 | 15.00 | DRLPRO | 02 | D | P | DRLG F/ 6587' TO 7217', 630 ' @ 42' PH |
| | | | | | | | | WOB / 19-22, RPM 50-60 |
| | | | | | | | | SPM 180 - GPM 527 |
| | | | | | | | | MW 9.6, VIS 37, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 8-10 K |
| | | | | | | | | PSI ON /OFF = 1700-1900 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 168/143/155 |
| | | | | | | | | SLIDE = 67' IN 2.5 HRS @ 27' PH |
| | | | | | | | | ROT = 563' IN 12.5 HRS @ 45' PH
STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| | | | | | | | | 10' N & 12' W OF TARGET CENTER |
| | 15:00 | - 15:30 | 0.50 | DRLPRO | 07 | Α | Р | SERVICE RIG, F/T ANN & HCR VALVE, BOP DRLL 70 |
| | | | | | | | | SEC SEC |
| | 15:30 | - 0:00 | 8.50 | DRLPRO | 02 | D | Р | DRLG F/ 7217' TO 7552', 335' @ 39' PH |
| | | | | | | | | WOB / 19-22, RPM 50-60 |
| | | | | | | | | SPM 180 - GPM 527 |
| | | | | | | | | MW 9.6, VIS 37, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 8-10 K |
| | | | | | | | | PSI ON /OFF = 1700-1900 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 185/150/165 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - OFF LINE |
| | | | | | | | | 0 CONN FLARE, 0 B/G FLARE |
| · . | | | | | | | | 14.10' N & 11.55' W OF TARGET CENTER |

| Well: NBU 921- | 25C MW2 | > | | Spud Co | nductor: 6 | 3/4/2011 | × | Spud Date: 5/5/2011 |
|-----------------|---------|-----------------|------------------|-------------|------------|-------------------|--------------|---|
| Project: UTAH-I | | - | | Site: NBL | | | | |
| Event: DRILLIN | | | | | | | 1 | Rig Name No: PIONEER 54/54, CAPSTAR 310/310 |
| Active Datum: F | | SEO OOUGH (ab | ove Menn C | Start Date | | | VEIDAIE IDE | End Date: 12/5/2211
0/0/26/PM/N/787/W/0/907/0/0 |
| Level) | UND WH, | oo.oousii (ab | ove Mean S | ca . | OVVI. IV | / W/ TN W V/ O/ S | 1312 116 231 | JO/25/FWWN// 67/W/0/90//0/0 |
| Date | SI | Time
art-End | Duration
(hr) | Phase | Code | Sub
Code | P/U | MD From Operation (usft) |
| 11/27/2011 | 0:00 | - 16:00 | 16.00 | DRLPRO | 02 | D | P | DRLG F/ 7552' TO 8167', 615' @ 38' PH
WOB / 21-23, RPM 50-60
SPM 180 - GPM 527
MW 9.6, VIS 37, CIRC RESERVE PIT
TRQ ON/OFF ≈ 9-10 K |
| | | | | | | | | PSI ON /OFF = 1900-200 , DIFF 250-500 PU/SO/RT = 205/150/173 SLIDE = 60' IN 4 HRS @ 15' PH ROT = 555' IN 12 HRS @ 46' PH STRATA - OFF LINE 0 CONN FLARE, 0 B/G FLARE |
| | 16:00 | - 16:30 | 0.50 | DRLPRO | 07 | Α | P | 8.75' N & 10' W OF TARGET CENTER SERVICE RIG, F/T ANN & HCR VALVE |
| | 16:30 | - 0:00 | 7.50 | DRLPRO | 02 | D | P | DRLG F/ 8167' TO 8563', 396' @ 53' PH
WOB / 21-23, RPM 50-60
SPM 180 - GPM 527 |
| | | | | | | | | MW 9.6, VIS 37, CIRC RESERVE PIT
TRQ ON/OFF = 9-10 K
PSI ON /OFF = 1900-200 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 205/150/175
SLIDE = 32' IN 2 HRS @ 16' PH
ROT = 364' IN 5.5 HRS @ 66' PH |
| | | | | | | | | STRATA - ON LINE
10 CONN FLARE, 5 B/G FLARE |
| 11/28/2011 | 0:00 | - 14:30 | 14.50 | DRLPRO | 02 | D | P | 8.95' N & 9.10 W OF TARGET CENTER DRLG F/ 8563' TO 9210', 647' @ 45' PH WOB / 21-23, RPM 60 SPM 180 - GPM 527 MW 9.6, VIS 37, CIRC RESERVE PIT TRQ ON/OFF = 9-10 K PSI ON /OFF = 1900-200 , DIFF 250-500 PU/SO/RT = 205/150/175 SLIDE = ROT = 100% STRATA - ON LINE 10 CONN FLARE, 5 B/G FLARE 4' N & 2.8' W OF TARGET CENTER |
| | | - 15:00 | 0.50 | DRLPRO | 07 | Α | P | SERVICE RIG, F/T ANN & HCR VALVE, BOP DRLL 70
SEC |
| | 15:00 | - 0:00 | 9.00 | DRLPRO | 02 | D | Р | DRLG F/ 9210' TO 9695', 485' @ 54' PH WOB / 21-23, RPM 60 SPM 180 - GPM 527 MW 9.8, VIS 34, CIRC RESERVE PIT TRQ ON/OFF = 9-10 K PSI ON /OFF = 1900-200 , DIFF 250-500 PU/SO/RT = 225/160/193 SLIDE = ROT = 100% STRATA - ON LINE 10 CONN FLARE, 5 B/G FLARE |

| | | | | | | | ummary F | |
|-----------------|----------------|----------------|-----------|-------------|-------------|------------------|--|---|
| Well: NBU 921-2 | 5C MW2 | · | | Spud Cor | nductor: | 5/4/2011 | Spu | d Date: 5/5/2011 |
| Project: UTAH-U | INTAH | | | Site: NBU | 921-25[| D PAD | ······································ | Rig Name No: PIONEER 54/54, CAPSTAR 310/310 |
| Event: DRILLING | | | | Start Date | · 4/27/2/ | 344 | | |
| Active Datum: R | | 60 00ueft (abo | we Mean 9 | | | | /S/21/E/25/0/0/ | End Date: 12/5/2211
26/PM/N/787/W/o/907/0/0 |
| Level) | 110 (2,4,0 | oo.oousit (apt | WE MEAN | oea . | OVVI. IV | * W/ T * W/ O/ S | 70121112310101 | 20/FWWW/0/4W/0/9W//0/0 |
| Date | | Time | Duration | Phase | Code | Sub | P/U N | ID From Operation |
| | 用的点面包含的 | art-End | (hr) | | | Code | | (usft) |
| 11/29/2011 | 0:00 | - 9:30 | 9.50 | DRLPRO | 02 | D | Р | DRLG F/ 9695' TO 10063', 368' @ 39' PH |
| | | | | | | | | WOB / 21-23, RPM 50-60 |
| | | | | | | | | SPM 180 - GPM 527 |
| | | | | | | | | MW 9.8, VIS 34, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 9-10 K |
| | | | | | | | | PSI ON /OFF = 1900-200 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 225/160/193 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - ON LINE |
| | | | | | | | | 100 PSI ANN, 200 PSI CONN |
| | | | | | | | | 10 CONN FLARE, 5 B/G FLARE |
| | | | | | | | | 14' S and 5.3' E OF TARGET CENTER |
| | 9:30 | - 17:30 | 8.00 | DRLPRO | 06 | Α | Р | SPOT 100 BBL 12 PPG PILL ON BOTTOM, POOH, |
| | | | | | | | - | |
| | | | | | | | | TIGHT SPOT @ 4800'- 4700', C/O BIT & MM, TIH TO |
| | 17:30 | - 18:30 | 1.00 | DRLPRO | 09 | Α | S | SHOE |
| | | 10.50 | 1.00 | DREFRO | UB | ^ | 3 | SLIP AND CUT 300' DRILL LINE, BAD SECTION |
| | 18:30 | - 23:30 | F 00 | 00,000 | | | <u>.</u> . | DETECTED DURING INSPECTION |
| | 10.50 | - 23:30 | 5.00 | DRLPRO | 06 | Α | P | TIH, FILLED PIPE @ 2800', 4400', 6400', 8070', WASH |
| | 00:00 | | | | | | | AND REAMED LAST 90' |
| | 23:30 | - 0:00 | 0.50 | DRLPRO | 02 | D | Р | DRLG F/ 10063' TO 10075', 12' @ 24' PH |
| | | | | | | | | WOB / 21-23, RPM 50-60 |
| | | | | | | | | SPM 180 - GPM 527 |
| | | | | | | | | MW 9.8, VIS 34, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 9-10 K |
| | | | | | | | | PSI ON /OFF = 1900-200 , DIFF 250-500 |
| | | | | | | | | PU/SO/RT = 225/160/193 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - ON LINE |
| | | | | | | | | 100 PSI ANN, 150 PSI CONN |
| | | | | | | | | 15 CONN FLARE, 10 B/G FLARE |
| | | | | | | | | 16.5' S & 7.3' E OF TARGET CENTER |
| 11/30/2011 | 0:00 | - 14:30 | 14.50 | DRLPRO | 02 | D | P | DRLG F/ 10075' TO 10450', 375' @ 26' PH |
| * a | | | | | | | | WOB / 21-23, RPM 50-60 |
| | | | | | | | | SPM 180 - GPM 527 |
| | | | | | | | | MW 11, VIS 40, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 10-14 K |
| | | | | | | | | PSI ON /OFF = 2000-2100 , DIFF 250-400 |
| | | | | | | | | PU/SO/RT = 250/175/195 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - ON LINE |
| | | | | | | | | 100 PSI ANN, 150 PSI CONN |
| | | | | | | | | 15 CONN FLARE, 10 B/G FLARE |
| | | | | | | | | 25.9' S & 15' E OF TARGET |
| | 14:30 | - 15:00 | 0.50 | DRLPRO | 07 | Α | Р | |
| | | , 5.00 | 2.00 | J.1.C. 11.O | ٠, | • • • | • | SERVICE RIG, F/T ANN & HCR VALVE, BOP DRLL 70 |
| | | | | | | | | SEC |

Operation Summary Report

| Well: NBU 921-25C MW2 | Spud Conductor: 5/4/2011 | Spud Date: 5/5/2011 | | | | |
|-----------------------|--------------------------|---|--|--|--|--|
| Project: UTAH-UINTAH | Site: NBU 921-25D PAD | Rig Name No: PIONEER 54/54, CAPSTAR 310/310 | | | | |
| Event: DRILLING | Start Date: 4/27/2011 | End Date: 12/5/2211 | | | | |

| Active Datum: R
Level) | KB @4,96 | 0,00usft (a | bove Mean S | iea | UWI: NV | N/NW/ 0/9 | 9/S/21/E/2 | 5/0/0/26/PM/N/787/W/0/907/0/0 |
|---------------------------|----------|-------------|-------------|----------|---------|------------------|------------|--|
| Date | .] т | ime | Duration | Phase | Code | Sub | P/U | MD From Operation |
| | | rt-End | (hr) | | | Code | | (usft) |
| | 15:00 | - 0:00 | 9.00 | DRLPRO | 02 | D | Р | DRLG F/ 10450' TO 10705', 255' @ 28' PH |
| | | | | | | | | WOB / 23-25, RPM 50-60 |
| | | | | | | | | SPM 160 - GPM 468 |
| | | | | | | | | MW 11, VIS 40, CIRC RESERVE PIT |
| | | | | | | | | TRQ ON/OFF = 10-14 K |
| | | | | | | | | PSI ON /OFF = 2000-2100 , DIFF 250-400 |
| | | | | | | | | PU/SO/RT = 260/165/200 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - ON LINE |
| | | | | | | | | 100 PSI ANN, 150 PSI CONN |
| | | | | | | | | 10 CONN FLARE, 5 B/G FLARE |
| 12/1/2011 | 0:00 | - 7:00 | 7.00 | DRLPRO | 02 | Ď | P | 41' S & 22.4' E OF TARGET |
| | | 7.00 | 7.00 | DIVELLIO | 02 | U | r | DRLG F/ 10705' TO 10970', 265' @ 38' PH |
| | | | | | | | | WOB / 23-25, RPM 50-60 |
| | | | | | | | | SPM 160 - GPM 468 |
| | | | | | | | | MW 11, VIS 40, CIRC RESERVE PIT
TRQ ON/OFF = 10-14 K |
| | | | | | | | | · · · · · · · · · · · · · · · · · · · |
| | | | | | | | | PSI ON /OFF = 2000-2100 , DIFF 250-400
PU/SO/RT = 260/165/200 |
| | | | | | | | | SLIDE = |
| | | | | | | | | ROT = 100% |
| | | | | | | | | STRATA - ON LINE |
| | | | | | | | | 100 PSI ANN, 150 PSI CONN |
| | | | | | | | | 10 CONN FLARE, 5 B/G FLARE |
| | | | | | | | | 48.43' S & 24.6' E OF TARGET CENTER |
| | 7:00 | - 10:30 | 3.50 | DRLPRO | 05 | F | ₽ | RAISE MW TO 11.2, VIS 45, LCM 20%, PUMP 2 HIGH |
| | | | | | | | | VIS SWEEPS |
| | 10:30 | - 16:30 | 6.00 | DRLPRO | 06 | E | P | WIPER TRIP TO SHOE AND BACK |
| | 16:30 | - 19:00 | 2.50 | DRLPRO | 05 | F | Р | RAISE MW TO 11.4, VIS 45, LCM 20%, PUMP HIGH |
| | | | | | | | | VIS SWEEP |
| | 19:00 | - 0:00 | 5.00 | DRLPRO | 06 | В | P | POOH FOR LOGS |
| 12/2/2011 | 0:00 | - 5:30 | 5.50 | DRLPRO | 11 | С | Р | HPJSM W/ RIG & LOGGERS, R/U & RUN OPEN HOLE |
| | | | | | | | | LOGS, LOGGERS DEPTH 10,955, DRILLERS DEPTH |
| | | | | | | | | 10,970, R/D |
| | 5:30 | - 10:00 | 4.50 | DRLPRO | 06 | F | Р | TIH TO L/D DRILL PIPE |
| | 10:00 | - 12:00 | 2.00 | DRLPRO | 05 | С | Р | CIRC & COND HOLE F/ CASING RUN, R/U KIMSEY |
| | 12:00 | | 4.00 | DRLPRO | 06 | A | P | HPJSM W/ RIG & KIMZEY, POOH, LAYING DOWN DP |
| | 16:00 | | 2.00 | DRLPRO | 22 | 1 | Z | |
| | | 10.00 | 2.00 | DILLINO | 22 | _ | ۲ | EQUIP FAIL W/ KIMSEY, WAITING ON NEW TRUCK. |
| | 18:00 | - 22:00 | 4.00 | DRLPRO | 06 | Α | P | CIRC HOLE |
| | | - 0:00 | 2.00 | DRLPRO | | | | POOH, LAYING DOWN DP AND BHA 2 |
| 19/9/9044 | | | | | 12 | A | P | HPJSM W/ RIG, KIMSEY, SAGERIDER & TSI |
| 12/3/2011 | | - 4:00 | 4.00 | DRLPRO | 12 | Α | P | R/U KIMSEY & SAGE RIDER |
| | | - 0:00 | 20.00 | DRLPRO | 12 | С | Р | RUN 3.5" TUBING & MW STATIONS, R/D 3.5" TOOLS |
| 12/4/2011 | | ~ 1:00 | 1.00 | DRLPRO | 12 | Α | P | R/D 3.5" TOOLS |
| | 1:00 | - 11:30 | 10.50 | DRLPRO | 12 | С | P | R/U 4,5" TOOLS & RUN 4.5" BTC, BANDING CABLES
TO PIPE |
| | 11:30 | - 13:00 | 1.50 | DRLPRO | 05 | Α | P | CIRC GAS OUT |
| | 13:00 | - 15:00 | 2.00 | DRLPRO | 11 | С | Р | HPJSM W/ RIG & LOGGERS, R/U & RUN IN TO |
| | | | | | | | | CHECK MW STATIONS |
| | 15:00 | - 17:00 | 2.00 | DRLPRO | 12 | С | P | ADDED 50 TO CASING TO PLACE WATCH |
| | | | | | | | | STATIONS |

Operation Summary Report

| Well: NBU 921-25C MW2 | Spud Conductor: 5/4/2011 | Spud Date: 5/5/2011 |
|-----------------------|--------------------------|---|
| Project: UTAH-UINTAH | Site: NBU 921-25D PAD | Rig Name No: PIONEER 54/54, CAPSTAR 310/310 |
| Event: DRILLING | Start Date: 4/27/2011 | End Date: 12/5/2211 |

Active Datum: RKB @4,960.00usft (above Mean Sea Level)

UWI: NW/NW/0/9/S/21/E/25/0/0/26/PM/N/787/W/0/907/0/0

| Date | | Time
lart-End | Duration
(hr) | Phase | Code | Sub
Code | P/U | MD From (usft) | Operation |
|-----------|-------|------------------|------------------|--------|------|-------------|-----|----------------|---|
| | 17:00 | - 19:00 | 2.00 | DRLPRO | 11 | С | Р | | HPJSM W/ RIG & LOGGERS, R/U & RUN IN TO CHECK MW STATIONS, CORRELATIONS WITHIN 0.3' |
| | 19:00 | - 23:00 | 4.00 | DRLPRO | 12 | В | Р | | HPJSM W/ RIG & BJ CEMENTERS, R/U |
| | 23:00 | - 0:00 | 1.00 | DRLPRO | 12 | E | P . | | PSI TEST LINES TO 5289, PUMP 25 BBLS WATER,
LEAD 466 SKS 11.9 PPG 2.36 YLD, TAIL 1993 SKS
14.3 PPG, 1.31 YLD, DROP PLUG & DISPLACE W/
146 BBLS CLAYCARE WATER, DISPLACE W/ 146
BBLS BRINE SOLUTION, BUMP HELD FOR 5 MIN, 0
BBLS CEMENT BACK TO SURFACE |
| 12/5/2011 | 0:00 | - 2:00 | 2.00 | DRLPRO | 12 | E | Р | | PSI TEST LINES TO 5289, PUMP 25 BBLS WATER,
LEAD 466 SKS 11.9 PPG 2.36 YLD, TAIL 1993 SKS
14.3 PPG, 1.31 YLD, DROP PLUG & DISPLACE W/
146 BBLS CLAYCARE WATER, DISPLACE W/ 146
BBLS BRINE SOLUTION, BUMP HELD FOR 5 MIN, 0 |
| | 2:00 | - 7:00 | 5.00 | DRLPRO | 14 | Α | P | | BBLS CEMENT BACK TO SURFACE SET C-21 SLIPS, SECURED H PLATE WITHIN WELL HEAD AND SECURED W/ BOPE, N/D AND MAKE ROUGH CUT TO CASING |
| **** | 7:00 | - 12:00 | 5.00 | DRLPRO | 14 | Α | P | | R/D & PREPARE TO SKID RIG & RELEASE RIG TO THE NBU 920-12LT @ 12:00 12/05/11 |



6750

7500

8250

9000

9750

10500

10830 38

-750

Project: Uintah County, UT UTM12 Site: NBU 921-25D Pad Well: NBU 921-25CMW2

Wellbore: OH Design: OH



WELL DETAILS: NBU 921-25CMW2 GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) +N/-S 0.00 +E/-W 0.00 Northing Easting Latittude Longitude 109° 30' 20.102 W 14533967.56 2058874.59 40° 0' 43.639 N

LAST SDI MWD PRODUCTION SURVEY

2250

1500

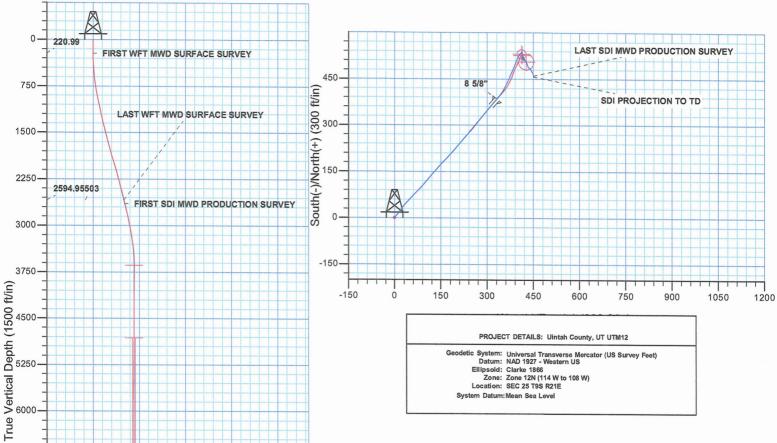
Vertical Section at 44.61° (1500 ft/in)

SDI PROJECTION TO TO

3000

Azimuths to True North Magnetic North: 11.04° Magnetic Field Strength: 52303.7snT Dip Angle: 65.87°

Date: 2011/10/08 Model: IGRF2010



Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US

Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SEC 25 T9S R21E

System Datum: Mean Sea Level

Design: OH (NBU 921-25CMW2/OH)

Created By: RobertScott Date: 15:38, December 13 2011



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25CMW2

OH

Design: OH

Standard Survey Report

13 December, 2011







Company:

Kerr McGee Oil and Gas Onshore LP

Project: Site:

Uintah County, UT UTM12 NBU 921-25D Pad

Well:

NBU 921-25CMW2

Wellbore: Design:

ОН

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference: Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Survey Calculation Method:

Database:

Minimum Curvature EDM5000-RobertS-Local

Project

Uintah County, UT UTM12

Map System: Geo Datum: Map Zone:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US Zone 12N (114 W to 108 W) System Datum:

Mean Sea Level

Site

NBU 921-25D Pad, SEC 25 T9S R21E

Site Position:

Northing:

14,533,953.48 usft

Latitude:

40° 0' 43.502 N

From:

Lat/Long

Easting:

2,058,860.26 usft

Longitude:

109° 30' 20.290 W

Position Uncertainty:

0.00 ft

Slot Radius:

13.200 in

Grid Convergence:

0.96 °

Well **Well Position** NBU 921-25CMW2, 787 FNL 907 FWL

+N/-S +E/-W 0.00 ft 0.00 ft Northina:

14,533,967.56 usft

Latitude:

40° 0' 43.639 N

Position Uncertainty

0.00 ft

Easting:

2,058,874.59 usft ft

Longitude: Ground Level: 109° 30' 20.102 W

Wellhead Elevation:

4,941.00 ft

Wellbore

ОН

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

2011/10/08

0.00

11.04

65.87

52.304

Design

Audit Notes:

Version:

1.0

OH

Phase:

ACTUAL

Tie On Depth:

0.00

0.00

Vertical Section:

Depth From (TVD)

(ft)

+N/-S (ft)

0.00

+E/-W (ft)

Direction (°)

44.61

Survey Program

Survey

2011/12/13

From To (ft) (ft)

Survey (Wellbore)

Tool Name

Description

15.00 2,706,00

786.00

8.56

41.25

783.68

2,655.00 Survey #1 WFT MWD SURFACE (OH) 10,970.00 Survey #2 SDI MWD PRODUCTION (OH)

MWD MWD SDI MWD - Standard MWD - Standard ver 1.0.1

1.42

1.23

5.21

| Measured
Depth
(ft) | Inclination
(°) | Azimuth
(°) | Vertical
Depth
(ft) | +N/-S
(ft) | +E/-W
(ft) | Vertical
Section
(ft) | Dogleg
Rate
(°/100ft) | Build
Rate
(°/100ft) | Turn
Rate
(°/100ft) |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0,00 | 15.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 221.00 | 0.80 | 32.86 | 220.99 | 1.21 | 0.78 | 1.41 | 0.39 | 0.39 | 0.00 |
| FIRST WFT | MWD SURFACE | SURVEY | | | | | | | |
| 312.00 | 2.14 | 35.19 | 311.96 | 3.13 | 2.10 | 3.71 | 1.47 | 1.47 | 2.56 |
| 406.00 | 3.43 | 44.10 | 405.85 | 6.58 | 5.07 | 8.25 | 1.44 | 1.37 | 9.48 |
| 500.00 | 4.38 | 38.75 | 499.63 | 11.40 | 9.28 | 14.63 | 1.08 | 1.01 | -5.69 |
| 595.00 | 5.88 | 33.62 | 594.25 | 18.28 | 14.24 | 23.02 | 1.65 | 1.58 | -5.40 |
| 690.00 | 7,38 | 36.25 | 688.61 | 27.26 | 20.54 | 33,83 | 1.61 | 1.58 | 2.77 |

28.90

47.07

37.60





Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well:

NBU 921-25D Pad NBU 921-25CMW2

Wellbore: Design: OH OH Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature EDM5000-RobertS-Local

Survey

| Measured
Depth | Inclination | Azimuth | Vertical
Depth | +N/-S | +E/-W | Vertical
Section | Dogleg
Rate | Build
Rate | Turn
Pete |
|-------------------|----------------|-----------|-------------------|--------|--------|---------------------|----------------|---------------|-------------------|
| (ft) | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (°/100ft) | (°/100ft) | Rate
(°/100ft) |
| 881.00 | 10.19 | 41.37 | 877.41 | 49.22 | 39.12 | 62.51 | 1.72 | 1.72 | 0.13 |
| 976.00 | 11.44 | 43.50 | 970.72 | 62.37 | 51.16 | 80.32 | 1.38 | 1,32 | 2.24 |
| 1,071.00 | 12.75 | 43.50 | 1,063.61 | 76.80 | 64.86 | 100.23 | 1.38 | 1.38 | 0.00 |
| 1,166.00 | 13.03 | 44.31 | 1,156.22 | 92.07 | 79.56 | 121.42 | 0.35 | 0.29 | 0.85 |
| 1,261.00 | 13.06 | 40.87 | 1,248.77 | 107.85 | 94.06 | 142.84 | 0.82 | 0.03 | -3,62 |
| 1,356.00 | 12.69 | 39.87 | 1,341.38 | 123.98 | 107.77 | 163.95 | 0.45 | -0.39 | -1.05 |
| 1,452.00 | 13.63 | 41.00 | 1,434.85 | 140.61 | 121.95 | 185.74 | 1.02 | 0.98 | 1.18 |
| 1,548.00 | 14.69 | 41.12 | 1,527.94 | 158.31 | 137.38 | 209.18 | 1.10 | 1.10 | 0.13 |
| 1,643.00 | 15.25 | 42.62 | 1,619.71 | 176.58 | 153,76 | 233.69 | 0.72 | 0.59 | 1.58 |
| 1,737.00 | 15.81 | 42.37 | 1,710.28 | 195.14 | 170,76 | 258.84 | 0.60 | 0.60 | -0.27 |
| 1,832.00 | 16.31 | 42.25 | 1,801.57 | 214.58 | 188.45 | 285.10 | 0.53 | 0.53 | -0.13 |
| 1,926.00 | 16.25 | 41.12 | 1,891.80 | 234.25 | 205.98 | 311.42 | 0.34 | -0.06 | -1.20 |
| 2,021.00 | 16.75 | 40.75 | 1,982.89 | 254.64 | 223.65 | 338.35 | 0.54 | 0.53 | -0.39 |
| 2,116.00 | 17.27 | 40.99 | 2,073.73 | 275.65 | 241.84 | 366,08 | 0.55 | 0.55 | 0.25 |
| 2,212.00 | 14.81 | 38.37 | 2,165.99 | 296.03 | 258.81 | 392.50 | 2.67 | -2.56 | -2.73 |
| 2,307.00 | 14.63 | 37.87 | 2,257.87 | 315.02 | 273,71 | 416.48 | 0.23 | -0.19 | -0.53 |
| 2,402.00 | 14.56 | 39.25 | 2,349,81 | 333.74 | 288.63 | 440.29 | 0.37 | -0.07 | 1.45 |
| 2,496.00 | 14.19 | 40.25 | 2,440.87 | 351.68 | 303.55 | 463.54 | 0.47 | -0.39 | 1.06 |
| 2,590.00 | 14.50 | 41.50 | 2,531.93 | 369.29 | 318.79 | 486.78 | 0.47 | 0,33 | 1.33 |
| 2,655.00 | 13.90 | 41.13 | 2,594.95 | 381.27 | 329.32 | 502.70 | 0.93 | -0.92 | -0.57 |
| LAST WET N | WD SURFACE | SURVEY | | | | | | | |
| 2,706.00 | 12.93 | 40.40 | 2,644.56 | 390.23 | 337.05 | 514.50 | 1.93 | -1.90 | -1.43 |
| FIRST SDI N | IWD PRODUCTION | ON SURVEY | | | | | | | |
| 2,801.00 | 13.28 | 31.08 | 2,737.09 | 407.67 | 349.57 | 535.71 | 2.25 | 0.37 | -9.81 |
| 2,895.00 | 14.06 | 25.66 | 2,828.43 | 427.21 | 360.09 | 557.01 | 1.59 | 0.83 | - 5.77 |
| 2,990.00 | 13.89 | 23.78 | 2,920.62 | 448.04 | 369.68 | 578.58 | 0.51 | -0.18 | -1.98 |
| 3,085.00 | 12.49 | 22.20 | 3,013.11 | 467.99 | 378.16 | 598.74 | 1.52 | -1.47 | -1.66 |
| 3,180.00 | 10.92 | 23,02 | 3,106.13 | 485.78 | 385.56 | 616.60 | 1.66 | -1.65 | 0.86 |
| 3,275.00 | 9.94 | 22.03 | 3,199.56 | 501.67 | 392.16 | 632.54 | 1.05 | -1.03 | -1.04 |
| 3,370.00 | 8.27 | 23,96 | 3,293.36 | 515.51 | 398.01 | 646.51 | 1.79 | -1.76 | 2.03 |
| 3,465.00 | 6.42 | 30.20 | 3,387.58 | 526,35 | 403.45 | 658.05 | 2.12 | -1.95 | 6.57 |
| 3,560.00 | 4.13 | 41.80 | 3,482.18 | 533,49 | 408.41 | 666,61 | 2.65 | -2.41 | 12.21 |
| 3,654.00 | 1.93 | 42.42 | 3,576.04 | 537.18 | 411.73 | 671.57 | 2.34 | -2.34 | 0.66 |
| 3,749.00 | 0.88 | 89.09 | 3,671.01 | 538.37 | 413.54 | 673.69 | 1.55 | -1.11 | 49.13 |
| 3,844.00 | 0.79 | 187.44 | 3,766.01 | 537.74 | 414.18 | 673.69 | 1.33 | -0.09 | 103.53 |
| 3,938.00 | 1.14 | 178.82 | 3,859.99 | 536.16 | 414.12 | 672.52 | 0.40 | 0.37 | -9.17 |
| 4,033.00 | 1.23 | 188.32 | 3,954.97 | 534,21 | 413.99 | 671.04 | 0.23 | 0.09 | 10.00 |
| 4,128.00 | 1.90 | 196.53 | 4,049.94 | 531.69 | 413.40 | 668.83 | 0.74 | 0.71 | 8.64 |
| 4,223.00 | 1.41 | 193.85 | 4,144.90 | 529.04 | 412.67 | 666.44 | 0.52 | -0.52 | -2.82 |
| 4,318.00 | 0.44 | 110.27 | 4,239.88 | 527.78 | 412.73 | 665.58 | 1.50 | -1.02 | -87.98 |
| 4,413.00 | 0.53 | 103.41 | 4,334.88 | 527.55 | 413.50 | 665.96 | 0.11 | 0.09 | -7.22 |
| 4,507.00 | 0.65 | 144.61 | 4,428.88 | 527.02 | 414.23 | 666.09 | 0.46 | 0.13 | 43,83 |
| | | | | | | | | | |





Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well:

NBU 921-25D Pad NBU 921-25CMW2

Wellbore: Design:

ОН ОН Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature EDM5000-RobertS-Local

| Measured | | 44,000 | Vertical | | | Vertical | Dogleg | Build | 4 |
|---------------|--------------------|----------------|---------------|---------------|---|------------------|-------------------|-------------------|---------------------------|
| Depth
(ft) | Inclination
(°) | Azimuth
(°) | Depth
(ft) | +N/-S
(ft) | +E/-W
(ft) | Section
(ft) | Rate
(°/100ft) | Rate
(°/100ft) | Turn
Rate
(°/100ft) |
| 4,697.00 | 0.97 | 152.19 | 4,618.86 | 524.86 | 544000000000000000000000000000000000000 | | | | |
| 4,792.00 | 1.32 | 163.44 | 4,713.84 | 523.10 | 415.62
416.31 | 665.54 | 0.27 | 0.24 | 7.60 |
| 4,887.00 | 0.35 | 130.92 | 4,808.83 | 521.86 | 416.84 | 664.76
664.26 | 0.44 | 0.37 | 11.84 |
| 4,982.00 | 0.53 | 145.78 | 4,903.83 | 521.31 | 417.31 | 664.19 | 1.10 | -1.02 | -34.23 |
| 5,077.00 | 0.88 | 156.67 | 4,998.82 | 520.28 | 417.84 | 663.83 | 0.22
0.39 | 0.19
0.37 | 15.64
11.46 |
| 5,171.00 | 0.79 | 155.80 | 5,092.81 | 519.02 | 418.39 | 663.32 | 0.10 | -0.10 | -0.93 |
| 5,266.00 | 0.79 | 160.10 | 5,187.80 | 517.81 | 418.89 | 662.81 | 0.06 | 0.00 | 4.53 |
| 5,361.00 | 0.97 | 166.52 | 5,282.79 | 516.41 | 419.30 | 662.10 | 0.22 | 0.19 | 6.76 |
| 5,455.00 | 1.14 | 180.84 | 5,376.77 | 514.70 | 419.47 | 661.00 | 0.33 | 0.18 | 15.23 |
| 5,550.00 | 1.49 | 185.77 | 5,471.75 | 512.53 | 419.33 | 659.36 | 0.39 | 0.37 | 5.19 |
| 5,645.00 | 0.70 | 221.01 | 5,566.73 | 510.86 | 418.83 | 657.82 | 1.06 | -0.83 | 37.09 |
| 5,740.00 | 0.85 | 330.75 | 5,661.73 | 511.04 | 418.10 | 657.43 | 1.34 | 0.16 | 115.52 |
| 5,835.00 | 1.06 | 348.80 | 5,756.71 | 512.52 | 417.59 | 658.12 | 0.38 | 0.22 | 19.00 |
| 5,930.00 | 0.97 | 356.36 | 5,851.70 | 514.18 | 417.36 | 659.15 | 0.17 | -0.09 | 7.96 |
| 6,025.00 | 0.62 | 357.68 | 5,946.69 | 515.50 | 417.29 | 660.04 | 0.37 | -0.37 | 1.39 |
| 6,119.00 | 0.63 | 350.34 | 6,040.68 | 516.51 | 417.18 | 660.69 | 0.09 | 0.01 | -7.81 |
| 6,214.00 | 0.42 | 8.65 | 6,135.68 | 517.37 | 417.15 | 661.28 | 0.28 | -0.22 | 19.27 |
| 6,309.00 | 0.26 | 29.23 | 6,230.68 | 517.90 | 417.31 | 661.77 | 0.21 | -0.17 | 21.66 |
| 6,404.00 | 0.18 | 172.41 | 6,325.68 | 517.95 | 417.43 | 661.88 | 0.44 | -0.08 | 150.72 |
| 6,499.00 | 0.30 | 160.45 | 6,420.68 | 517.56 | 417.53 | 661.68 | 0.14 | 0.13 | -12.59 |
| 6,594.00 | 0.70 | 162,56 | 6,515.67 | 516.77 | 417.79 | 661.30 | 0.42 | 0.42 | 2.22 |
| 6,688.00 | 0.87 | 176.93 | 6,609.66 | 515.51 | 418.00 | 660.55 | 0.28 | 0.18 | 15.29 |
| 6,783.00 | 1.14 | 174.34 | 6,704.65 | 513.85 | 418.13 | 659.46 | 0.29 | 0.28 | -2.73 |
| 6,878.00 | 0.50 | 233.19 | 6,799.64 | 512.67 | 417.90 | 658.45 | 1.03 | -0.67 | 61.95 |
| 6,973.00 | 1.32 | 309.16 | 6,894.63 | 513.11 | 416.71 | 657.93 | 1.36 | 0.86 | 79.97 |
| 7,068.00 | 1.34 | 330.08 | 6,989.60 | 514.76 | 415.31 | 658.13 | 0.51 | 0.02 | 22.02 |
| 7,162.00 | 1.08 | 346.34 | 7,083.58 | 516.57 | 414.55 | 658.89 | 0.46 | -0.28 | 17.30 |
| 7,257.00 | 0.79 | 352.41 | 7,178.57 | 518.09 | 414.26 | 659.76 | 0.32 | -0,31 | 6.39 |
| 7,352.00 | 0.92 | 1.13 | 7,273.56 | 519.51 | 414.19 | 660.71 | 0.19 | 0.14 | 9.18 |
| 7,447.00 | 0.53 | 354.78 | 7,368.55 | 520.71 | 414.16 | 661.55 | 0.42 | -0.41 | -6.68 |
| 7,542.00 | 0.18 | 48.45 | 7,463.55 | 521.24 | 414.23 | 661.98 | 0.47 | -0.37 | 56.49 |
| 7,636.00 | 0.29 | 115.79 | 7,557.55 | 521.24 | 414.56 | 662.21 | 0.29 | 0.12 | 71.64 |
| 7,731.00 | 0.53 | 164.58 | 7,652.55 | 520.71 | 414.89 | 662.06 | 0.42 | 0.25 | 51.36 |
| 7,827.00 | 0.79 | 165.45 | 7,748.54 | 519.64 | 415.17 | 661.50 | 0.27 | 0.27 | 0.91 |
| 7,922.00 | 1.23 | 164.76 | 7,843.53 | 518.02 | 415.61 | 660.66 | 0.46 | 0.46 | -0.73 |
| 8,017.00 | 0.91 | 152.65 | 7,938.51 | 516.37 | 416.22 | 659.91 | 0.41 | -0.34 | -12.75 |
| 8,112.00 | 0.26 | 189.72 | 8,033.51 | 515.49 | 416.53 | 659.50 | 0.76 | -0.68 | 39.02 |
| 8,206.00 | 0.35 | 312.42 | 8,127.50 | 515.47 | 416.28 | 659.31 | 0.57 | 0.10 | 130.53 |
| 8,301.00 | 0.35 | 303.28 | 8,222.50 | 515.82 | 415.83 | 659.25 | 0.06 | 0.00 | -9.62 |
| 8,396.00 | 0.09 | 44.70 | 8,317.50 | 516.04 | 415.64 | 659.26 | 0.40 | -0.27 | 106.76 |
| 8,491.00 | 0.35 | 101.92 | 8,412.50 | 516.03 | 415.97 | 659.49 | 0.33 | 0.27 | 60.23 |
| 8,585.00 | 0.58 | 132.77 | 8,506.50 | 515.65 | 416.60 | 659.66 | 0.35 | 0.24 | 32.82 |
| 8,680.00 | 0.79 | 113.26 | 8,601.49 | 515.06 | 417.56 | 659.92 | 0.33 | 0.22 | -20.54 |





Company:

Kerr McGee Oil and Gas Onshore LP

Project: Site: Uintah County, UT UTM12

Site: Well: NBU 921-25D Pad NBU 921-25CMW2

Wellbore: Design: OH OH Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature

EDM5000-RobertS-Local

| Measured | | | Vertical | | | Vertical | Dogleg | Build | Turn |
|---------------|--------------------|----------------|---------------|---------------|---------------|-----------------|-------------------|-------------------|-------------------|
| Depth
(ft) | Inclination
(°) | Azimuth
(°) | Depth
(ft) | +N/-S
(ft) | +E/-W
(ft) | Section
(ft) | Rate
(°/100ft) | Rate
(°/100ft) | Rate
(°/100ft) |
| 8,870.00 | 0.88 | 126.18 | 8,791.47 | 513.74 | 420.01 | 660.69 | 0.15 | 0.03 | 9.84 |
| 8,965.00 | 1.06 | 128.55 | 8,886.46 | 512.76 | 421,28 | 660.89 | 0,19 | 0,19 | 2,49 |
| 9,060.00 | 0.97 | 130.22 | 8,981.44 | 511.69 | 422.58 | 661.05 | 0.10 | -0.09 | 1.76 |
| 9,155.00 | 1.14 | 141.28 | 9,076.43 | 510.44 | 423.79 | 661.00 | 0.28 | 0.18 | 11.64 |
| 9,249.00 | 1.20 | 164.54 | 9,170.41 | 508.76 | 424.64 | 660.40 | 0.51 | 0.06 | 24.74 |
| 9,344.00 | 1.32 | 154.21 | 9,265.38 | 506.81 | 425.38 | 659.54 | 0.27 | 0.13 | -10.87 |
| 9,439.00 | 1.41 | 140.50 | 9,360.36 | 504.93 | 426.60 | 659.05 | 0.36 | 0.09 | -14.43 |
| 9,534.00 | 1.23 | 156.06 | 9,455.33 | 503.09 | 427.75 | 658.56 | 0.42 | -0.19 | 16,38 |
| 9,628,00 | 1.32 | 165.99 | 9,549.31 | 501.12 | 428.43 | 657.62 | 0.25 | 0.10 | 10.56 |
| 9,723.00 | 1.01 | 158.68 | 9,644.29 | 499.28 | 428.99 | 656.71 | 0.36 | -0.33 | -7.69 |
| 9,818.00 | 1.38 | 165.77 | 9,739.27 | 497.39 | 429.58 | 655.78 | 0.42 | 0.39 | 7.46 |
| 9,913.00 | 1.91 | 154.51 | 9,834.23 | 494.85 | 430.54 | 654.65 | 0,65 | 0.56 | -11,85 |
| 10,008.00 | 1.93 | 157.03 | 9,929.18 | 491.95 | 431.85 | 653.50 | 0.09 | 0.02 | 2.65 |
| 10,103.00 | 2.05 | 127.86 | 10,024.12 | 489.43 | 433.81 | 653.09 | 1.06 | 0.13 | -30.71 |
| 10,198.00 | 2.29 | 135.14 | 10,119.05 | 487.05 | 436.49 | 653.27 | 0.38 | 0.25 | 7.66 |
| 10,293.00 | 2.55 | 140.77 | 10,213.97 | 484.06 | 439.17 | 653.03 | 0.37 | 0.27 | 5.93 |
| 10,388.00 | 2.64 | 144.99 | 10,308.87 | 480.63 | 441.76 | 652.40 | 0.22 | 0.09 | 4.44 |
| 10,482.00 | 2.46 | 148.94 | 10,402.78 | 477.13 | 444.04 | 651.52 | 0.27 | -0.19 | 4.20 |
| 10,577.00 | 2.55 | 157.11 | 10,497.69 | 473.44 | 445.92 | 650.20 | 0.39 | 0.09 | 8.60 |
| 10,671.00 | 2.46 | 159.66 | 10,591.60 | 469.62 | 447.43 | 648.55 | 0.15 | -0.10 | 2.71 |
| 10,766.00 | 2.55 | 162.30 | 10,686.51 | 465.70 | 448.78 | 646.70 | 0.15 | 0.09 | 2.78 |
| 10,861.00 | 2.37 | 162.04 | 10,781.42 | 461.81 | 450.03 | 644.81 | 0.19 | -0.19 | -0.27 |
| 10,910.00 | 2.37 | 164.67 | 10,830.38 | 459.87 | 450.61 | 643.84 | 0.22 | 0.00 | 5.37 |
| LAST SDIM | WD PRODUCTIO | N SURVEY | | | | | | | |
| 10,970.00 | 2.37 | 164.67 | 10,890.33 | 457.48 | 451,27 | 642.60 | 0.00 | 0.00 | 0.00 |

| Design Annotations | | | | rande en verkende produktionen in sold at transporten blitte verkende en bestellt en bestellt en bestellt best
Die 1800-1800-1800 in 1800 in |
|--------------------|---------------|---------------|---------------|---|
| Measured | Vertical | Local Coordi | nates | |
| Depth
(ft) | Depth
(ft) | +N/-S
(ft) | +E/-W
(ft) | Comment |
| 221.00 | 220.99 | 1.21 | 0.78 | FIRST WFT MWD SURFACE SURVEY |
| 2,655.00 | 2,594.95 | 381.27 | 329,32 | LAST WFT MWD SURFACE SURVEY |
| 2,706.00 | 2,644.56 | 390.23 | 337.05 | FIRST SDI MWD PRODUCTION SURVEY |
| 10,910.00 | 10,830.38 | 459.87 | 450.61 | LAST SDI MWD PRODUCTION SURVEY |
| 10,970.00 | 10,890.33 | 457.48 | 451.27 | SDI PROJECTION TO TD |

| Checked By: | Approved By: | Date: | |
|-------------|---------------|-------|--|
| | rippioted by: | Date. | |
| | | | |



Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25D Pad NBU 921-25CMW2

OH

Design: OH

Survey Report - Geographic

13 December, 2011





SDI Survey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

Project: Site:

Uintah County, UT UTM12

Well:

NBU 921-25D Pad NBU 921-25CMW2

Wellbore: Design:

OH OH Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature EDM5000-RobertS-Local

Project

Uintah County, UT UTM12

Map System: Geo Datum: Map Zone:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

NBU 921-25D Pad, SEC 25 T9S R21E

0.00 ft

Site Position: From:

Lat/Long

Northing:

14,533,953.48 usft

Latitude:

40° 0' 43,502 N

Position Uncertainty:

Easting: Slot Radius: 2,058,860.26 usft 13.200 in

Longitude: **Grid Convergence:** 109° 30' 20.290 W

0.96°

Well Well Position NBU 921-25CMW2, 787 FNL 907 FWL

0.00 ft

Northing: 0.00 ft Easting:

14,533,967.56 usft 2,058,874.59 usft

Latitude: Longitude:

40° 0' 43.639 N 109° 30' 20.102 W

Position Uncertainty

0.00 ft

Wellhead Elevation:

ft

Ground Level:

4,941.00 ft

Wellbore

OH

+N/-S

+E/-W

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

2011/10/08

0.00

11.04

65.87

52,304

Design

Audit Notes:

Version:

1.0

ОН

Phase:

ACTUAL

Tie On Depth:

109° 30' 19.600 W

0.00

Vertical Section:

Depth From (TVD) (ft)

+N/-S (ft)

0.00

+E/-W (ft)

0.00

Direction (°)

44.61

Survey Program

Survey

2011/12/13

From (ft)

To (ft) Survey (Wellbore)

Tool Name

Description

2,058,912.87

MWD - Standard

15.00 2.706.00

881.00

10.19

41.37

877.41

49.22

2,655.00 Survey #1 WFT MWD SURFACE (OH) 10,970.00 Survey #2 SDI MWD PRODUCTION (OH)

MWD MWD SDI

MWD - Standard ver 1.0.1

40° 0' 44.126 N

| Measured
Depth
(ft) | Inclination
(°) | Azimuth
(°) | Vertical
Depth
(ft) | +N/-S
(ft) | +E/-W
(ft) | Map
Northing
(usft) | Map
Easting
(usft) | Latitude | Longitude |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|---------------------------|--------------------------|-----------------|-------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.533.967.56 | 2.058.874.59 | 40° 0' 43.639 N | 109° 30' 20.102 W |
| 15.00 | 0.00 | 0.00 | 15.00 | 0.00 | 0.00 | 14,533,967,56 | 2.058.874.59 | 40° 0′ 43.639 N | 109° 30' 20.102 W |
| 221.00 | 0.80 | 32.86 | 220.99 | 1.21 | 0.78 | 14,533,968.78 | 2,058,875.35 | 40° 0' 43,651 N | 109° 30' 20.092 W |
| FIRST W | FT MWD SUR | FACE SURV | EY | | | | | | |
| 312.00 | 2.14 | 35.19 | 311.96 | 3.13 | 2.10 | 14,533,970.73 | 2,058,876.64 | 40° 0' 43.670 N | 109° 30' 20.075 W |
| 406.00 | 3.43 | 44.10 | 405.85 | 6.58 | 5.07 | 14,533,974.23 | 2,058,879.55 | 40° 0' 43.704 N | 109° 30' 20.037 W |
| 500.00 | 4.38 | 38.75 | 499.63 | 11.40 | 9.28 | 14,533,979.12 | 2,058,883.67 | 40° 0' 43.752 N | 109° 30' 19.983 W |
| 595.00 | 5.88 | 33.62 | 594.25 | 18.28 | 14.24 | 14,533,986.08 | 2,058,888,52 | 40° 0' 43.820 N | 109° 30' 19.919 W |
| 690.00 | 7.38 | 36.25 | 688.61 | 27.26 | 20.54 | 14,533,995.16 | 2,058,894.67 | 40° 0' 43,909 N | 109° 30' 19.838 W |
| 786.00 | 8.56 | 41.25 | 783.68 | 37.60 | 28.90 | 14,534,005,64 | 2,058,902.85 | 40° 0' 44.011 N | 109° 30' 19.731 W |

14,534,017.44

39.12



Survey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 921-25D Pad NBU 921-25CMW2

Wellbore: Design: OH OH Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

North Reference:
Survey Calculation Method:

Database:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature EDM5000-RobertS-Local

| feasured . | | | Vertical | | | Map | Мар | | |
|----------------------|--------------------|------------------|----------------------|------------------|---------------|--------------------|-------------------|------------------------|----------------------------------|
| Depth
(ft) | Inclination
(°) | Azimuth
(°) | Depth
(ft) | +N/-S
(ft) | +E/-W
(ft) | Northing
(usft) | Easting
(usft) | Latitude | Longitude |
| 976.00 | 11.44 | 43.50 | 970.72 | 62.37 | 51.16 | 14,534,030.78 | 2,058,924,69 | 40° 0' 44.256 N | 109° 30' 19,44 |
| 1,071.00 | 12.75 | 43.50 | 1,063.61 | 76.80 | 64.86 | 14,534,045.44 | 2,058,938.15 | 40° 0′ 44.298 N | 109° 30° 19.44
109° 30' 19.26 |
| 1,166.00 | 13.03 | 44.31 | 1,156.22 | 92.07 | 79.56 | 14,534,060.96 | 2,058,952.59 | 40° 0′ 44.549 N | 109 30 19.26
109° 30' 19.08 |
| 1,261.00 | 13.06 | 40.87 | 1,248.77 | 107.85 | 94.06 | 14,534,076.98 | 2,058,966.82 | 40° 0' 44,705 N | 109 30 19.08
109° 30' 18.89 |
| 1,356.00 | 12.69 | 39.87 | 1,341.38 | 123.98 | 107.77 | 14,534,093.33 | 2,058,980.26 | 40° 0' 44.865 N | 109° 30' 18.71 |
| 1,452.00 | 13.63 | 41.00 | 1,434.85 | 140.61 | 121.95 | 14,534,110.20 | 2,058,994.16 | 40° 0' 45.029 N | |
| 1,548.00 | 14.69 | 41.12 | 1,527.94 | 158.31 | 137.38 | 14,534,128.16 | 2,059,009.29 | 40° 0' 45.204 N | 109° 30' 18.53
109° 30' 18.33 |
| 1,643.00 | 15.25 | 42.62 | 1,619.71 | 176.58 | 153.76 | 14,534,146.70 | 2,059,025.36 | 40° 0' 45.385 N | 109° 30' 18.12 |
| 1,737.00 | 15.81 | 42.37 | 1,710.28 | 195.14 | 170.76 | 14,534,165.54 | 2,059,042,05 | 40° 0' 45.568 N | 109° 30' 17.90 |
| 1,832.00 | 16.31 | 42,25 | 1,801.57 | 214.58 | 188.45 | 14,534,185.27 | 2,059,059,41 | 40° 0′ 45.760 N | |
| 1,926,00 | 16.25 | 41,12 | 1,891.80 | 234,25 | 205.98 | 14,534,205.24 | 2,059,076.60 | | 109° 30' 17.68 |
| 2,021.00 | 16.75 | 40.75 | 1,982.89 | 254.64 | 223.65 | 14,534,225.92 | 2,059,078.94 | 40° 0' 45.955 N | 109° 30' 17.45 |
| 2,116.00 | 17.27 | 40.99 | 2,073.73 | 275.65 | 241.84 | 14,534,247.23 | | 40° 0' 46.156 N | 109° 30' 17.22 |
| 2,212.00 | 14.81 | 38.37 | 2,165.99 | 296.03 | 258.81 | | 2,059,111.77 | 40° 0' 46.364 N | 109° 30' 16.99 |
| 2,307.00 | 14.63 | 37.87 | 2,163.99 | 315.02 | 273,71 | 14,534,267.89 | 2,059,128.39 | 40° 0' 46.565 N | 109° 30' 16.77 |
| 2,402.00 | 14.56 | 39.25 | 2,349.81 | 333.74 | 288.63 | 14,534,287.13 | 2,059,142.97 | 40° 0' 46.753 N | 109° 30' 16.58 |
| 2,496.00 | 14.19 | 40.25 | 2,349.87 | 351.68 | | 14,534,306.10 | 2,059,157.58 | 40° 0' 46,938 N | 109° 30' 16.39 |
| 2,590.00 | 14.50 | 41.50 | 2,531.93 | 369.29 | 303.55 | 14,534,324.29 | 2,059,172.19 | 40° 0' 47.115 N | 109° 30' 16.20 |
| 2,655.00 | 13.90 | 41.13 | | | 318.79 | 14,534,342.15 | 2,059,187.14 | 40° 0' 47.289 N | 109° 30' 16.00 |
| | | | 2,594.95 | 381.27 | 329.32 | 14,534,354.30 | 2,059,197.46 | 40° 0' 47.408 N | 109° 30' 15.86 |
| | T MWD SURI | | | 100000 | | | | | |
| 2,706.00 | 12.93 | 40.40 | 2,644.56 | 390.23 | 337.05 | 14,534,363.39 | 2,059,205.04 | 40° 0′ 47.496 N | 109° 30' 15,77 |
| | DI MWD PROD | | | | | | | | |
| 2,801.00 | 13.28 | 31.08 | 2,737.09 | 407.67 | 349.57 | 14,534,381.03 | 2,059,217.27 | 40° 0' 47,669 N | 109° 30' 15.60 |
| 2,895.00 | 14.06 | 25.66 | 2,828.43 | 427.21 | 360.09 | 14,534,400.75 | 2,059,227.46 | 40° 0' 47.862 N | 109° 30' 15.47 |
| 2,990.00 | 13.89 | 23.78 | 2,920.62 | 448.04 | 369.68 | 14,534,421.74 | 2,059,236.70 | 40° 0' 48.068 N | 109° 30' 15.35 |
| 3,085.00 | 12.49 | 22.20 | 3,013.11 | 467.99 | 378.16 | 14,534,441.83 | 2,059,244.84 | 40° 0' 48.265 N | 109° 30' 15.24 |
| 3,180.00 | 10.92 | 23.02 | 3,106.13 | 485.78 | 385.56 | 14,534,459.74 | 2,059,251.95 | 40° 0' 48.441 N | 109° 30′ 15.14 |
| 3,275.00 | 9.94 | 22.03 | 3,199.56 | 501.67 | 392.16 | 14,534,475.74 | 2,059,258.27 | 40° 0' 48.598 N | 109° 30' 15.06 |
| 3,370.00 | 8.27 | 23.96 | 3,293.36 | 515.51 | 398.01 | 14,534,489.68 | 2,059,263,89 | 40° 0' 48.735 N | 109° 30′ 14.98 |
| 3,465.00 | 6.42 | 30.20 | 3,387.58 | 526.35 | 403.45 | 14,534,500.60 | 2,059,269.15 | 40° 0' 48.842 N | 109° 30' 14.91 |
| 3,560.00 | 4.13 | 41.80 | 3,482.18 | 533.49 | 408.41 | 14,534,507.83 | 2,059,273.99 | 40° 0' 48.912 N | 109° 30' 14.85 |
| 3,654.00 | 1,93 | 42.42 | 3,576.04 | 537.18 | 411.73 | 14,534,511.57 | 2,059,277.25 | 40° 0' 48,949 N | 109° 30' 14.81 |
| 3,749.00 | 0.88 | 89.09 | 3,671.01 | 538.37 | 413.54 | 14,534,512.80 | 2,059,279.04 | 40° 0' 48.961 N | 109° 30' 14.78 |
| 3,844,00 | 0.79 | 187.44 | 3,766.01 | 537,74 | 414.18 | 14,534,512.17 | 2,059,279.69 | 40° 0' 48.954 N | 109° 30' 14.77 |
| 3,938.00 | 1.14 | 178.82 | 3,859.99 | 536.16 | 414.12 | 14,534,510.59 | 2,059,279.65 | 40° 0' 48.939 N | 109° 30' 14.77 |
| 4,033.00 | 1.23 | 188.32 | 3,954.97 | 534.21 | 413.99 | 14,534,508.63 | 2,059,279.56 | 40° 0' 48,919 N | 109° 30' 14.78 |
| 4,128.00 | 1.90 | 196.53 | 4,049.94 | 531.69 | 413.40 | 14,534,506.11 | 2,059,279.01 | 40° 0' 48.895 N | 109° 30' 14.78 |
| 4,223.00 | 1.41 | 193,85 | 4,144.90 | 529.04 | 412.67 | 14,534,503.45 | 2,059,278.32 | 40° 0' 48.868 N | 109° 30' 14.79 |
| 4,318.00 | 0.44 | 110.27 | 4,239.88 | 527.78 | 412.73 | 14,534,502.19 | 2,059,278.41 | 40° 0' 48.856 N | 109° 30′ 14,79 |
| 4,413.00 | 0.53 | 103.41 | 4,334.88 | 527.55 | 413.50 | 14,534,501.97 | 2,059,279.18 | 40° 0′ 48.854 N | 109° 30′ 14.78 |
| 4,507.00 | 0.65 | 144.61 | 4,428.88 | 527.02 | 414.23 | 14,534,501.45 | 2,059,279.92 | 40° 0' 48.848 N | 109° 30' 14.77 |
| 4,602.00 | 0.74 | 144.97 | 4,523.87 | 526.07 | 414.90 | 14,534,500.52 | 2,059,280.60 | 40° 0' 48.839 N | 109° 30' 14.76 |
| 4,697.00 | 0,97 | 152,19 | 4,618.86 | 524.86 | 415.62 | 14,534,499.32 | 2,059,281,35 | 40° 0' 48.827 N | 109° 30' 14.76 |
| 4,792.00 | 1.32 | 163.44 | 4,713.84 | 523.10 | 416.31 | 14,534,497.57 | 2,059,282.06 | 40° 0' 48.810 N | 109° 30' 14.75 |
| 4,887.00 | 0,35 | 130,92 | 4,808.83 | 521.86 | 416.84 | 14,534,496.34 | 2,059,282,61 | 40° 0' 48,797 N | |
| 4,982.00 | 0.53 | 145.78 | 4,903.83 | 521.31 | 417.31 | 14,534,495.80 | 2,059,283.09 | | 109° 30′ 14.74 |
| 5,077.00 | 0.88 | 156.67 | 4,998.82 | 520.28 | 417.84 | 14,534,494.77 | | 40° 0' 48.792 N | 109° 30' 14.73 |
| 5,171.00 | 0.79 | 155.80 | 5,092.81 | 519.02 | 417.84 | | 2,059,283.64 | 40° 0' 48.782 N | 109° 30' 14.73 |
| 5,266.00 | 0.79 | 160.10 | 5,187.80 | 517.81 | 418.89 | 14,534,493.53 | 2,059,284.22 | 40° 0' 48.769 N | 109° 30' 14.72 |
| 5,361.00 | 0.79 | 166.52 | | | | 14,534,492.32 | 2,059,284.73 | 40° 0' 48.757 N | 109° 30' 14.71 |
| | | | 5,282.79
5,376,77 | 516.41
514.70 | 419.30 | 14,534,490.93 | 2,059,285.16 | 40° 0' 48.744 N | 109° 30' 14.71 |
| 5,455.00 | 1.14 | 180.84 | 5,376.77 | 514.70
512.53 | 419.47 | 14,534,489.23 | 2,059,285.36 | 40° 0′ 48.727 N | 109° 30′ 14.71 |
| 5,550.00 | 1.49 | 185.77 | 5,471.75 | 512.53 | 419.33 | 14,534,487.05 | 2,059,285.26 | 40° 0' 48.705 N | 109° 30' 14.71 |
| 5,645.00 | 0.70 | 221.01 | 5,566.73 | 510.86 | 418.83 | 14,534,485.38 | 2,059,284.78 | 40° 0' 48.689 N | 109° 30' 14.71 |
| 5,740.00
5,835.00 | 0.85
1.06 | 330.75
348.80 | 5,661.73
5,756.71 | 511.04
512.52 | 418.10 | 14,534,485.54 | 2,059,284.06 | 40° 0' 48,690 N | 109° 30' 14.72 |



Survey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well:

NBU 921-25D Pad NBU 921-25CMW2

Wellbore: Design: OH

ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54) GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature

| sign: | ОН | e i ne la compresa de la compresa d | - who have the contravagues of | Database: | | EDM5000-RobertS-Local | | | |
|------------------------|--------------|--|--------------------------------|---------------------|------------------|--------------------------------|------------------------------|--|--|
| rvey | | | | | | | | e travel i travel amerika en er en er en | and the first of the second of |
| Measured
Depth | Inclination | Azimuth | Vertical
Depth | +N/-S | +E/-W | Map
Northing | Map
Easting | | |
| (ft) | (°) | (°) | (ft) | (ft) | (ft) | (usft) | (usft) | Latitude | Longitude |
| 5,930.00 | 0.97 | 356.36 | 5,851.70 | 514.18 | 417.36 | 14,534,488.67 | 2,059,283.27 | 40° 0' 48.722 N | 109° 30' 14.737 |
| 6,025.00 | 0.62 | 357.68 | 5,946.69 | 515.50 | 417.29 | 14,534,489.98 | 2,059,283.17 | 40° 0' 48.735 N | 109° 30' 14.738 |
| 6,119.00 | 0.63 | 350.34 | 6,040.68 | 516.51 | 417.18 | 14,534,491.00 | 2,059,283.05 | 40° 0' 48.745 N | 109° 30' 14.740 |
| 6,214.00 | 0.42 | 8.65 | 6,135.68 | 517.37 | 417.15 | 14,534,491.86 | 2,059,283.00 | 40° 0' 48.753 N | 109° 30' 14.740 |
| 6,309.00 | 0.26 | 29.23 | 6,230.68 | 517.90 | 417.31 | 14,534,492.39 | 2,059,283.15 | 40° 0' 48.758 N | 109° 30' 14.738 |
| 6,404.00 | 0.18 | 172.41 | 6,325.68 | 517.95 | 417.43 | 14,534,492.44 | 2,059,283.27 | 40° 0' 48.759 N | 109° 30' 14.737 |
| 6,499.00 | 0.30 | 160.45 | 6,420.68 | 517.56 | 417.53 | 14,534,492.05 | 2,059,283.38 | 40° 0′ 48.755 N | 109° 30' 14.735 |
| 6,594.00
6,688.00 | 0.70
0.87 | 162.56
176.93 | 6,515.67 | 516.77
515.51 | 417.79 | 14,534,491.27 | 2,059,283.65 | 40° 0′ 48.747 N | 109° 30' 14.732 |
| 6,783.00 | 1.14 | 174.34 | 6,609.66
6,704.65 | 515.51
513.85 | 418.00 | 14,534,490.01 | 2,059,283.88 | 40° 0' 48.735 N | 109° 30' 14.729 |
| 6,878.00 | 0.50 | 233.19 | 6,799.64 | 513.65 | 418.13
417.90 | 14,534,488.36 | 2,059,284.04 | 40° 0' 48.718 N | 109° 30′ 14.728 |
| 6,973.00 | 1.32 | 309.16 | 6,894.63 | 512.07 | 416.71 | 14,534,487.16
14,534,487.59 | 2,059,283,82 | 40° 0' 48.707 N | 109° 30' 14.731 |
| 7,068.00 | 1.34 | 330.08 | 6,989.60 | 514.76 | 415.31 | 14,534,489.22 | 2,059,282.64 | 40° 0' 48.711 N | 109° 30′ 14.746 |
| 7,162.00 | 1.08 | 346.34 | 7,083.58 | 516.57 | 414.55 | 14,534,491.02 | 2,059,281.21
2,059,280.42 | 40° 0' 48.727 N
40° 0' 48.745 N | 109° 30' 14.764 |
| 7,257.00 | 0.79 | 352.41 | 7,178.57 | 518.09 | 414.26 | 14,534,492.53 | 2,059,280.09 | 40° 0′ 48,760 N | 109° 30' 14.774
109° 30' 14.777 |
| 7,352.00 | 0.92 | 1.13 | 7,273.56 | 519.51 | 414.19 | 14,534,493.94 | 2,059,280.00 | 40° 0' 48.774 N | 109° 30' 14.777 |
| 7,447.00 | 0.53 | 354.78 | 7,368.55 | 520.71 | 414.16 | 14,534,495.14 | 2,059,279.95 | 40° 0' 48.786 N | 109° 30' 14.779 |
| 7,542.00 | 0.18 | 48.45 | 7,463.55 | 521.24 | 414.23 | 14,534,495.68 | 2,059,280.02 | 40° 0' 48.791 N | 109° 30' 14.778 |
| 7,636.00 | 0.29 | 115.79 | 7,557.55 | 521.24 | 414.56 | 14,534,495.68 | 2,059,280.34 | 40° 0' 48.791 N | 109° 30' 14.774 |
| 7,731.00 | 0.53 | 164.58 | 7,652.55 | 520.71 | 414.89 | 14,534,495.16 | 2,059,280.68 | 40° 0' 48.786 N | 109° 30' 14.769 |
| 7,827.00 | 0.79 | 165.45 | 7,748.54 | 519.64 | 415.17 | 14,534,494.09 | 2,059,280.99 | 40° 0' 48.776 N | 109° 30' 14.766 |
| 7,922.00 | 1.23 | 164.76 | 7,843.53 | 518.02 | 415.61 | 14,534,492.48 | 2,059,281.45 | 40° 0' 48.760 N | 109° 30' 14.760 |
| 8,017.00 | 0.91 | 152.65 | 7,938.51 | 516.37 | 416.22 | 14,534,490.84 | 2,059,282.09 | 40° 0' 48.743 N | 109° 30' 14.752 |
| 8,112.00 | 0.26 | 189.72 | 8,033.51 | 515. 4 9 | 416,53 | 14,534,489.96 | 2,059,282.41 | 40° 0' 48.734 N | 109° 30' 14.748 |
| 8,206.00 | 0.35 | 312.42 | 8,127.50 | 515.47 | 416.28 | 14,534,489.94 | 2,059,282.17 | 40° 0′ 48.734 N | 109° 30' 14.75′ |
| 8,301.00 | 0.35 | 303.28 | 8,222.50 | 515.82 | 415.83 | 14,534,490.29 | 2,059,281.70 | 40° 0' 48.738 N | 109° 30' 14.757 |
| 8,396.00 | 0.09 | 44.70 | 8,317.50 | 516.04 | 415.64 | 14,534,490.50 | 2,059,281.51 | 40° 0' 48.740 N | 109° 30′ 14.766 |
| 8,491.00 | 0.35 | 101.92 | 8,412.50 | 516.03 | 415.97 | 14,534,490.50 | 2,059,281.85 | 40° 0′ 48.740 N | 109° 30' 14.75 |
| 8,585.00
8,680.00 | 0.58
0.79 | 132.77
113.26 | 8,506.50
8,601.49 | 515.65
515.06 | 416.60 | 14,534,490.12 | 2,059,282.48 | 40° 0' 48.736 N | 109° 30' 14.74 |
| 8,775.00 | 0.79 | 116.83 | 8,696.48 | 515.06
514.49 | 417.56
418.79 | 14,534,489.55 | 2,059,283.45 | 40° 0' 48.730 N | 109° 30' 14.73 |
| 8,870.00 | 0.88 | 126.18 | 8,791.47 | 514.49 | 420.01 | 14,534,489.00 | 2,059,284.69 | 40° 0′ 48.725 N | 109° 30' 14.719 |
| 8,965.00 | 1.06 | 128.55 | 8,886.46 | 512.76 | 420.01 | 14,534,488.27
14,534,487.31 | 2,059,285.92
2,059,287.21 | 40° 0' 48.717 N | 109° 30' 14.703 |
| 9,060.00 | 0.97 | 130.22 | 8,981.44 | 511.69 | 422.58 | 14,534,486.27 | 2,059,288.53 | 40° 0' 48,708 N
40° 0' 48,697 N | 109° 30' 14.68'
109° 30' 14.67(|
| 9,155.00 | 1.14 | 141.28 | 9,076.43 | 510.44 | 423.79 | 14,534,485.03 | 2,059,289.75 | 40° 0' 48.685 N | 109° 30' 14.65! |
| 9,249.00 | 1.20 | 164.54 | 9,170.41 | 508.76 | 424.64 | 14,534,483.37 | 2,059,290.63 | 40° 0' 48.668 N | 109° 30' 14.644 |
| 9,344.00 | 1.32 | 154.21 | 9,265,38 | 506.81 | 425.38 | 14,534,481.44 | 2,059,291.40 | 40° 0' 48,649 N | 109° 30' 14.634 |
| 9,439.00 | 1.41 | 140.50 | 9,360.36 | 504.93 | 426.60 | 14,534,479.57 | 2,059,292.65 | 40° 0' 48,630 N | 109° 30' 14.619 |
| 9,534.00 | 1.23 | 156.06 | 9,455.33 | 503.09 | 427.75 | 14,534,477.76 | 2,059,293.84 | 40° 0' 48,612 N | 109° 30' 14,604 |
| 9,628.00 | 1.32 | 165.99 | 9,549.31 | 501.12 | 428.43 | 14,534,475.80 | 2,059,294.55 | 40° 0' 48.592 N | 109° 30' 14,598 |
| 9,723.00 | 1.01 | 158.68 | 9,644.29 | 499.28 | 428.99 | 14,534,473.96 | 2,059,295.15 | 40° 0' 48.574 N | 109° 30′ 14.58 |
| 9,818.00 | 1.38 | 165.77 | 9,739.27 | 497.39 | 429,58 | 14,534,472.09 | 2,059,295.76 | 40° 0' 48,556 N | 109° 30' 14,58 |
| 9,913.00 | 1.91 | 154.51 | 9,834.23 | 494.85 | 430.54 | 14,534,469.56 | 2,059,296.77 | 40° 0′ 48.530 N | 109° 30' 14,56 |
| 10,008.00 | 1.93 | 157.03 | 9,929.18 | 491.95 | 431.85 | 14,534,466.68 | 2,059,298.12 | 40° 0' 48.502 N | 109° 30' 14,55 |
| 10,103.00 | 2.05 | 127.86 | 10,024.12 | 489.43 | 433.81 | 14,534,464.20 | 2,059,300.13 | 40° 0' 48.477 N | 109° 30' 14.52 |
| 10,198.00 | 2.29 | 135.14 | 10,119.05 | 487.05 | 436.49 | 14,534,461.86 | 2,059,302.85 | 40° 0' 48.453 N | 109° 30' 14.49 |
| 10,293.00 | 2.55 | 140.77 | 10,213.97 | 484.06 | 439.17 | 14,534,458.92 | 2,059,305.57 | 40° 0′ 48.424 N | 109° 30' 14,45 |
| 10,388.00 | 2.64 | 144.99 | 10,308.87 | 480.63 | 441.76 | 14,534,455.54 | 2,059,308.22 | 40° 0' 48.390 N | 109° 30' 14,424 |
| 10,482.00
10,577.00 | 2.46
2.55 | 148.94
157.11 | 10,402.78 | 477.13
473.44 | 444.04 | 14,534,452.07 | 2,059,310.56 | 40° 0' 48.355 N | 109° 30' 14.39 |
| 10,577.00 | 2.55 | 157.11 | 10,497.69
10,591.60 | 473.44
469.62 | 445.92
447.43 | 14,534,448.41 | 2,059,312.50 | 40° 0' 48.319 N | 109° 30' 14.37 |
| 10,871.00 | 2.46 | 162.30 | 10,591.60 | 469.62
465.70 | 447.43
448.78 | 14,534,444.62
14,534,440.72 | 2,059,314.08 | 40° 0′ 48.281 N | 109° 30' 14.35 |
| 10,760.00 | 2.37 | 162.04 | 10,781.42 | 461.81 | 450.03 | 14,534,440.72 | 2,059,315.50
2,059,316.81 | 40° 0' 48.242 N
40° 0' 48.204 N | 109° 30' 14.33- |
| 10,910.00 | 2.37 | 164.67 | 10,731.42 | 459.87 | 450.03
450.61 | 14,534,434.93 | 2,059,317.42 | 40° 0' 48.204 N
40° 0' 48.185 N | 109° 30' 14.311
109° 30' 14.311 |
| | OI MWD PROD | | | 100,01 | 400.01 | .,, | 2,000,017.42 | -0 0 -0,100 N | 100 00 14.310 |



SDISurvey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

Project: Site: Uintah County, UT UTM12 NBU 921-25D Pad

Site: Well;

NBU 921-25CMW2

Wellbore: Design: ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well NBU 921-25CMW2

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

GL 4941' & KB 19' @ 4960.00ft (PIONEER 54)

True

Minimum Curvature EDM5000-RobertS-Local

| | SDI PROJ | JECTION TO | TD | | | | | | | |
|--|--------------|-------------|-----------------|--------------------|-------------------|-----------------|---------------------------|------------------------------|--------------------------------|---------------------------------|
| Measured Vertical Map Map Depth Inclination Azimuth Depth +N/-S +E/-W Northing Easting (ft) (2) (ft) (6) (ft) (6) (ft) | | | | 10,890.33 | 457.48 | 451.27 | 14,534,432.55 | 2,059,318.12 | 40° 0' 48.161 N | 109° 30' 14.302 W |
| Measured Vertical Map Map | (n) | (°) | (°) | (ft) | (ft) | (ft) | (usft) | (usft) | Latitude | Longitude |
| | Depth | Inclination | Azimuth | Depth | +N/-S | +E/-W | | | | |
| | Measured | | | Vertical | | | Man | Man | | |
| | пчеу | | erovaren áreks. | Brozensky previous | 5/48/19/5/48/19/5 | á Rower de para | Date of Salar Development | S.L. 15 VEZHETA (DEN GALATO) | Cobe Select of Mary 12 0000 by | BO NEW PORKS SOLERNA TOWARD OWN |

| Design Annotations | in the Control of the | et van 1. julius van 1. julius br>1. julius 1. ju | | |
|--------------------|--|---|---------|---------------------------------|
| Measured | Vertical | Local Coord | linates | |
| Depth | Depth | +N/-S | +E/-W | |
| (m) | (ft) | (ft) | (ft) | Comment |
| 221.00 | 220.99 | 1,21 | 0.78 | FIRST WFT MWD SURFACE SURVEY |
| 2,655.00 | 2,594.95 | 381.27 | 329.32 | LAST WFT MWD SURFACE SURVEY |
| 2,706.00 | 2,644.56 | 390.23 | 337.05 | FIRST SDI MWD PRODUCTION SURVEY |
| 10,910.00 | 10,830,38 | 459.87 | 450.61 | LAST SDI MWD PRODUCTION SURVEY |
| 10,970.00 | 10,890,33 | 457.48 | 451.27 | SDI PROJECTION TO TD |
| | | | | |

| Checked By: | Approved By: | Date: |
|-------------|--------------|-------|

Sundry Number: 21092 API Well Number: 43047515680000

| | STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE | | FORM 9 | | | |
|--|--|--|---|--|--|--|
| | 5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01189 ST | | | | | |
| SUNDF | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: | | | | | |
| Do not use this form for proposition-hole depth, reenter plu
DRILL form for such proposals. | existing wells below current
se APPLICATION FOR PERMIT TO | 7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES | | | | |
| 1. TYPE OF WELL
Test Well | | | 8. WELL NAME and NUMBER:
NBU 921-25C MW2 | | | |
| 2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONS | HORE, L.P. | | 9. API NUMBER:
43047515680000 | | | |
| 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S | PHON
treet, Suite 600, Denver, CO, 80217 3779 | NE NUMBER: 720 929-6515 Ext | 9. FIELD and POOL or WILDCAT:
NATURAL BUTTES | | | |
| 4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0787 FNL 0907 FWL | | | COUNTY:
UINTAH | | | |
| QTR/QTR, SECTION, TOWNSHI | IP, RANGE, MERIDIAN:
5 Township: 09.0S Range: 21.0E Meridian: | S | STATE:
UTAH | | | |
| 11. CHE | CK APPROPRIATE BOXES TO INDICAT | E NATURE OF NOTICE, REPORT, | OR OTHER DATA | | | |
| TYPE OF SUBMISSION | | TYPE OF ACTION | | | | |
| MIRU ROTARY RIG. F
2011. RAN PRODU
PIONEER RIG 54 ON
WILL BE INCLUDED W
ON FINAL COMPLET | CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION SMPLETED OPERATIONS. Clearly show all performation CASING AND CEMENT OF COUNTY OF COUNT | 00' TO 10,970' ON DEC. 1,
ED CASING. RELEASED
DETAILS OF CEMENT JOB
REPORT. WELL IS WAITIN
THIS LOCATION WILL BE | | | | |
| NAME (PLEASE PRINT) Jaime Scharnowske | PHONE NUMBER | TITLE Pagulartory Analyst | | | | |
| SIGNATURE | 720 929-6304 | DATE | | | | |
| N/A | | 12/8/2011 | | | | |